

SOURCE CODE:

content_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="com.example.sel_45.ex1_8.MainActivity"
    tools:showIn="@layout/activity_main">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name:"
        android:id="@+id/name_id"

        android:layout_alignBaseline="@+id/editText"
        android:layout_alignBottom="@+id/editText"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="@string/to"
        android:id="@+id/editText2"
        android:layout_alignParentTop="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:inputType="textPersonName"
        android:text="Please enter name"
        android:ems="10"
        android:id="@+id/editText"
        android:layout_below="@+id/editText2"
        android:layout_toLeftOf="@+id/editText2"
        android:layout_toStartOf="@+id/editText2" />

    />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="DOB:"

        android:layout_below="@+id/editText"
```

```
    android:layout_alignRight="@+id/name_id"
    android:layout_alignEnd="@+id/name_id" />
```

```
<DatePicker
    android:layout_width="wrap_content"
    android:layout_height="200px"
    android:id="@+id/date_of_birth"
```

```
    android:layout_below="@+id/editText"
    android:layout_alignLeft="@+id/editText"
```

/>

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Address"
    android:layout_below="@+id/date_of_birth"
    android:layout_marginTop="20px"
    android:layout_alignLeft="@+id/name_id"
```

/>

```
<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Please enter Address"
    android:id="@+id/address"
    android:minLines="6"
    android:layout_below="@+id/date_of_birth"
    android:layout_alignLeft="@+id/date_of_birth"
    />
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/address"
    android:text="Email"
    android:layout_alignRight="@+id/name_id"
    android:layout_marginTop="30px"
```

/>

```
<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/address"
    android:layout_alignLeft="@+id/address"
    android:inputType="textEmailAddress"
    android:text="Please enter email"
    android:id="@+id/email"
```

/>

```
<TextView
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
    android:layout_below="@+id/email"
    android:text="Phone no"
    android:layout_alignLeft="@+id/name_id"
    android:layout_marginTop="30px"
```

/>

```
<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/mobile"
    android:text="Please enter mob no"
    android:layout_below="@+id/email"
    android:layout_alignLeft="@+id/email"
/>
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/mobile"
    android:text="Gender"
    android:layout_alignLeft="@+id/name_id"
    android:layout_marginTop="20px"
```

/>

```
<RadioButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Male"
    android:id="@+id/male"
    android:layout_below="@+id/mobile"
    android:layout_alignLeft="@+id/mobile"
/>
```

```
<RadioButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Female"
    android:id="@+id/female"
    android:layout_below="@+id/mobile"
    android:layout_alignRight="@+id/mobile"
/>
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/male"
    android:text="Languages"
    android:layout_alignLeft="@+id/name_id"
    android:layout_marginTop="20px"
```

/>

```
<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="English"
    android:layout_alignLeft="@+id/email"
    android:layout_below="@+id/male"
```

```

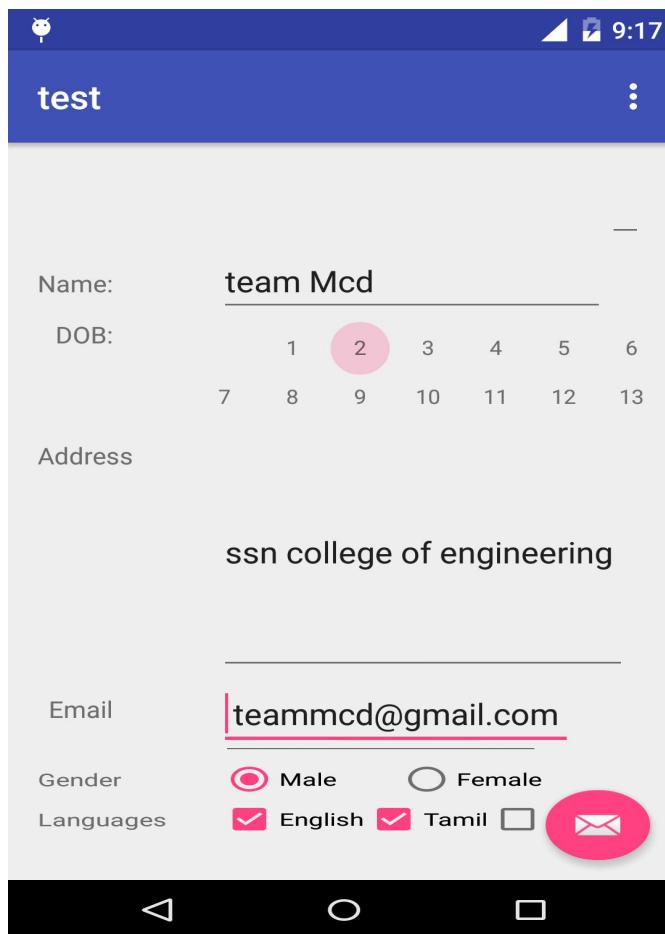
    android:id="@+id/english"
  />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Tamil"
    android:layout_toRightOf="@+id/english"
    android:layout_below="@+id/male"
    android:id="@+id/tamil"
  />
<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hindi"
    android:layout_toRightOf="@+id/tamil"
    android:layout_below="@+id/male"
    android:id="@+id/Hindi"
  />

</RelativeLayout>

```

OUTPUT:



RESULT:

Thus an android application
for displaying information
has been developed using
GUI controls and
formatting.

SOURCE CODE:

content.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:showIn="@layout/activity_main"
    tools:context="com.example.warl.test.MainActivity">

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="71dp"
        android:onClick=" setDate"
        android:text="@string/date_button_set"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/date_view_set"
        android:textAppearance="?android:attr/textAppearanceMedium"
        android:layout_alignTop="@+id/button1"
        android:layout_alignParentStart="true" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/date_selected"
        android:textAppearance="?android:attr/textAppearanceMedium"
        android:layout_alignBottom="@+id/button1"
        android:layout_toEndOf="@+id/textView2" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="?android:attr/textAppearanceSmall"
        android:text="NAME :"
        android:id="@+id/result"
        android:layout_alignParentTop="true"
        android:layout_alignParentStart="true" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
    android:inputType="textPersonName"
    android:ems="10"
    android:id="@+id/editText"
    android:layout_below="@+id/result"
    android:layout_alignParentStart="true"
    android:layout_alignEnd="@+id/button1" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceSmall"
    android:text="ADDRESS:"
    android:id="@+id/textView4"
    android:layout_below="@+id/textView3"
    android:layout_alignEnd="@+id/checkBox" />

<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPostalAddress"
    android:ems="10"
    android:id="@+id/editText2"
    android:layout_below="@+id/textView4"
    android:layout_alignParentStart="true"
    android:layout_alignEnd="@+id/button1" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceSmall"
    android:text="GENDER:"
    android:id="@+id/textView5"
    android:layout_centerVertical="true"
    android:layout_alignParentStart="true" />

<RadioButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Male"
    android:id="@+id/radioButton"
    android:checked="false"
    android:layout_below="@+id/textView5"
    android:layout_alignParentStart="true" />

<RadioButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Female"
    android:id="@+id/radioButton2"
    android:layout_above="@+id/textView6"
    android:layout_alignStart="@+id/checkBox2" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceSmall"
    android:text="LANGUAGES KNOWN:"
    android:id="@+id/textView6"
    android:layout_marginTop="49dp"
    android:layout_below="@+id/radioButton"
    android:layout_alignParentStart="true" />
```

```

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Tamil"
    android:id="@+id/checkBox"
    android:layout_below="@+id/textView6"
    android:layout_alignParentStart="true" />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="English"
    android:id="@+id/checkBox2"
    android:layout_below="@+id/textView6"
    android:layout_toEndOf="@+id/checkBox" />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hindi"
    android:id="@+id/checkBox3"
    android:layout_below="@+id/checkBox"
    android:layout_alignParentStart="true" />

<CheckBox
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Sanskrit"
    android:id="@+id/checkBox4"
    android:layout_below="@+id/checkBox2"
    android:layout_toEndOf="@+id/checkBox" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="SUBMIT"
    android:id="@+id/submit"
    android:layout_alignParentBottom="true"
    android:layout_alignStart="@+id/textView4"
    android:layout_alignParentStart="false" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="RESET"
    android:id="@+id/reset"
    android:layout_alignParentBottom="true"
    android:layout_alignParentEnd="true" />
</RelativeLayout>
```

MainActivity.java

```

package com.example.warl.test;

import android.app.DatePickerDialog;
import android.app.Dialog;
import android.content.Intent;
```

```
import android.os.Bundle;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.TextView;
import android.widget.Toast;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {

    private DatePicker datePicker;
    private Calendar calendar;
    private TextView dateView;
    private int year, month, day;
    private EditText name,address;
    private RadioButton male,female;
    private CheckBox c1,c2,c3,c4;
    private Button reset;
    private Button submit;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name = (EditText) findViewById(R.id.editText);
        male = (RadioButton) findViewById(R.id.radioButton);
        female = (RadioButton) findViewById(R.id.radioButton2);
        c1 = (CheckBox) findViewById(R.id.checkBox);
        submit = (Button) findViewById(R.id.submit);
        reset = (Button) findViewById(R.id.reset);
        c2 = (CheckBox) findViewById(R.id.checkBox2);
        c3 = (CheckBox) findViewById(R.id.checkBox3);
        c4 = (CheckBox) findViewById(R.id.checkBox4);
        address = (EditText) findViewById(R.id.editText2);
        dateView = (TextView) findViewById(R.id.textView3);
        calendar = Calendar.getInstance();
        year = calendar.get(Calendar.YEAR);
        month = calendar.get(Calendar.MONTH);
        day = calendar.get(Calendar.DAY_OF_MONTH);
        showDate(year, month + 1, day);
        male.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                female.setChecked(false);
            }
        });
        female.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                male.setChecked(false);
            }
        });
    }

    private void showDate(int year, int month, int day) {
        dateView.setText(month + " " + day + " " + year);
    }
}
```

```

        }
    });
    reset.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            showDate(year, month + 1, day);
            name.setText("");
            address.setText("");
            male.setChecked(false);
            female.setChecked(false);
            c1.setChecked(false);
            c2.setChecked(false);
            c3.setChecked(false);
            c4.setChecked(false);
        }
    });

    submit.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String str="";
            Intent launchResult = new Intent(MainActivity.this,
SecondActivity.class);
            launchResult.putExtra("Name", name.getText().toString());
            launchResult.putExtra("DOB", dateView.getText());
            launchResult.putExtra("Address", address.getText().toString());
            if(male.isChecked())
                launchResult.putExtra("Gender", "Male");
            else
                launchResult.putExtra("Gender", "Female");
            if(c1.isChecked())
                str+="\nTamil";
            if(c2.isChecked())
                str+="\nEnglish";
            if(c3.isChecked())
                str+="\nHindi";
            if(c4.isChecked())
                str+="\nSanskrit";
            launchResult.putExtra("lang", str);

            startActivity(launchResult);
        }
    });
}

@SuppressWarnings("deprecation")
public void setDate(View view) {
    showDialog(999);
    Toast.makeText(getApplicationContext(), "ca", Toast.LENGTH_SHORT)
        .show();
}

@Override
protected Dialog onCreateDialog(int id) {
    // TODO Auto-generated method stub
    if (id == 999) {
        return new DatePickerDialog(this, myDateListener, year, month, day);
    }
    return null;
}

```

```

private DatePickerDialog.OnDateSetListener myDateListener = new
DatePickerDialog.OnDateSetListener() {
    @Override
    public void onDateSet(DatePicker arg0, int arg1, int arg2, int arg3) {
        // TODO Auto-generated method stub
        // arg1 = year
        // arg2 = month
        // arg3 = day
        showDate(arg1, arg2+1, arg3);
    }
};

private void showDate(int year, int month, int day) {
    dateView.setText(new StringBuilder().append(day).append("/")
        .append(month).append("/").append(year));
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_main, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    // Handle action bar item clicks here. The action bar will
    // automatically handle clicks on the Home/Up button, so long
    // as you specify a parent activity in AndroidManifest.xml.
    int id = item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id == R.id.action_settings) {
        return true;
    }

    return super.onOptionsItemSelected(item);
}
}
}

```

SecondActivity.java

```

package com.example.warl.test;

import android.os.Bundle;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.TextView;

public class SecondActivity extends AppCompatActivity {

    private TextView t;

    @Override
    protected void onCreate(Bundle savedInstanceState) {

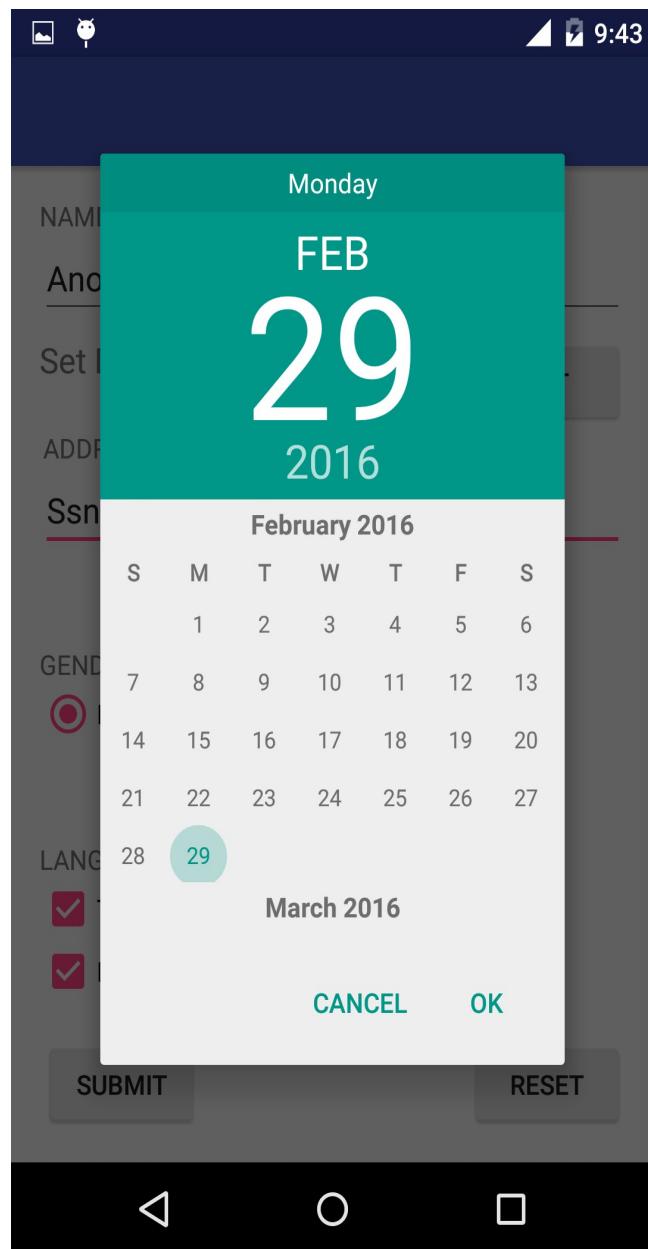
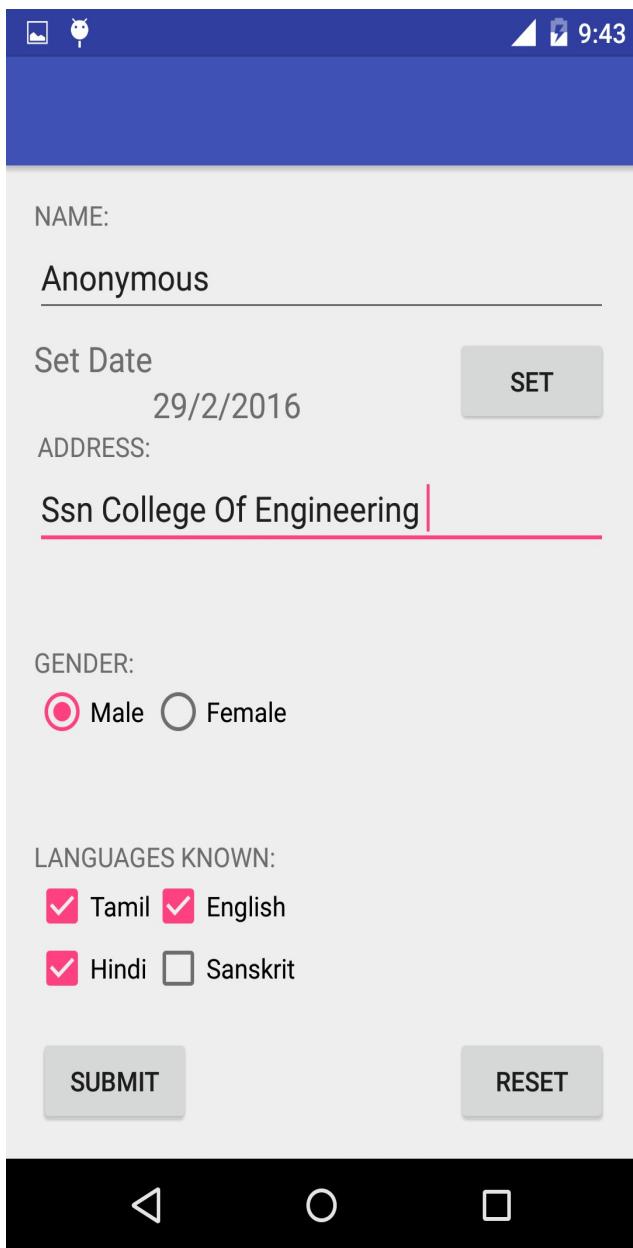
```

```

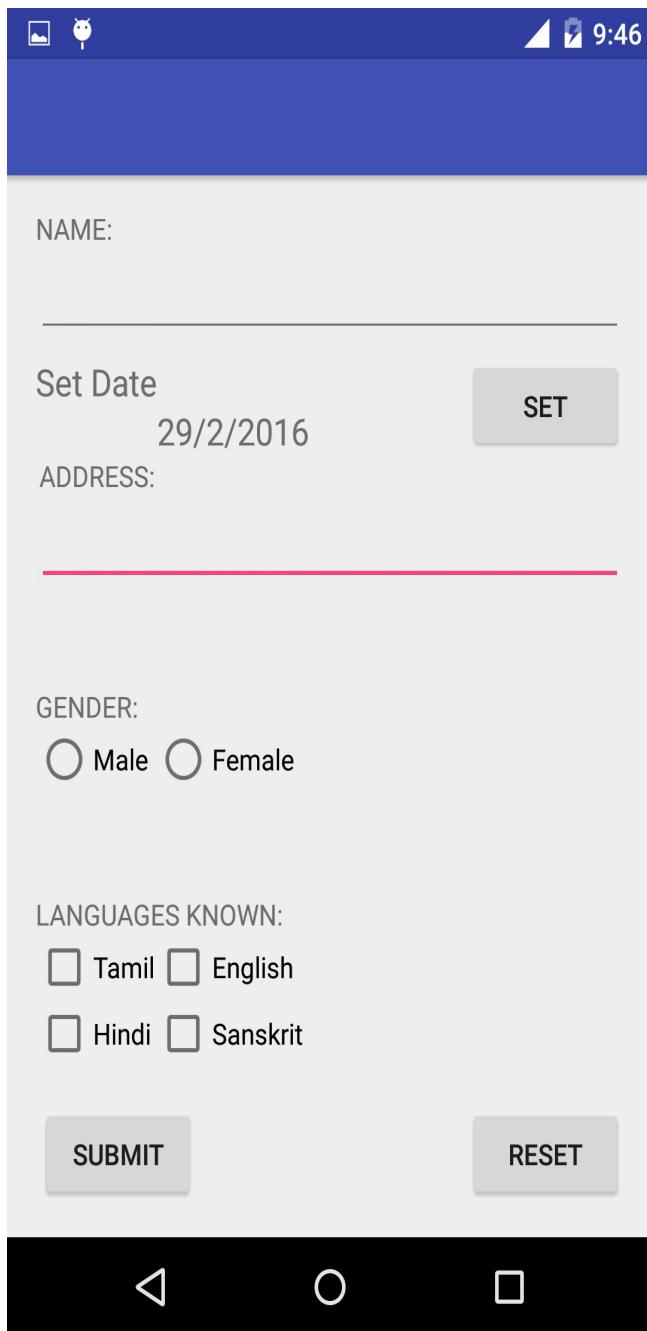
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_second);
t = (TextView) findViewById(R.id.result);
Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
setSupportActionBar(toolbar);
getSupportActionBar().setDisplayHomeAsUpEnabled(true);
Bundle extras = getIntent().getExtras();
t.setText(extras.getString("Name") + "\n" + extras.getString("DOB") + "\n" +
extras.getString("Address") + "\n" + extras.getString("Gender") + "\n" +
extras.getString("lang") + "\n");
}

```

OUTPUT:



RESET:



SET:

RESULT:

Thus an android application for a personal page has been developed.

SOURCE CODE:

content_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="fill_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context=".MainActivity"
    tools:showIn="@layout/activity_main">

    <Button
        android:layout_width="80dp"
        android:layout_height="50dp"
        android:text="@string/oparan"
        android:id="@+id/button"
        android:layout_marginTop="153dp"
        android:layout_alignParentTop="true"
        android:layout_alignParentStart="true" />

    <Button
        android:layout_width="90dp"
        android:layout_height="50dp"
        android:text="@string/claran"
        android:id="@+id/button2"
        android:layout_alignTop="@+id/button"
        android:layout_toStartOf="@+id/button3" />

    <Button
        android:layout_width="90dp"
        android:layout_height="50dp"
        android:text="@string/mod"
        android:id="@+id/button3"
        android:layout_alignTop="@+id/button2"
        android:layout_toStartOf="@+id/button4" />

    <Button
        android:layout_width="90dp"
        android:layout_height="50dp"
        android:text="@string/del"
        android:id="@+id/button4"
        android:layout_alignTop="@+id/button3"
        android:layout_alignParentEnd="true" />

    <Button
        android:layout_width="90dp"
        android:layout_height="50dp"
```

```
    android:text=""
    android:id="@+id/button5"
    android:layout_below="@+id/button"
    android:layout_toStartOf="@+id/button2" />

<Button
    android:layout_width="80dp"
    android:layout_height="50dp"
    android:text="@string/seven"
    android:id="@+id/button6"
    android:layout_below="@+id/button"
    android:layout_alignParentStart="true" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/eight"
    android:id="@+id/button7"
    android:layout_alignTop="@+id/button5"
    android:layout_toStartOf="@+id/button3" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/nine"
    android:id="@+id/button8"
    android:layout_alignTop="@+id/button7"
    android:layout_alignStart="@+id/button3" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/div"
    android:id="@+id/button9"
    android:layout_below="@+id/button3"
    android:layout_toEndOf="@+id/button3" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/four"
    android:id="@+id/button10"
    android:layout_below="@+id/button5"
    android:layout_alignEnd="@+id/button" />

<Button
    android:layout_width="80dp"
    android:layout_height="50dp"
    android:text="@string/one"
    android:id="@+id/button11"
    android:layout_below="@+id/button10"
    android:layout_alignEnd="@+id/button10" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/five"
    android:id="@+id/button12"
    android:layout_alignTop="@+id/button10"
    android:layout_toEndOf="@+id/button5" />
```

```
<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/two"
    android:id="@+id/button13"
    android:layout_alignTop="@+id/button11"
    android:layout_toStartOf="@+id/button8" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/six"
    android:id="@+id/button14"
    android:layout_alignTop="@+id/button12"
    android:layout_alignStart="@+id/button8" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/three"
    android:id="@+id/button15"
    android:layout_alignTop="@+id/button13"
    android:layout_alignStart="@+id/button14" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/mul"
    android:id="@+id/button16"
    android:layout_alignTop="@+id/button14"
    android:layout_toEndOf="@+id/button14" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/minus"
    android:id="@+id/button17"
    android:layout_alignTop="@+id/button15"
    android:layout_toEndOf="@+id/button15" />

<Button
    android:layout_width="80dp"
    android:layout_height="50dp"
    android:text="@string/zero"
    android:id="@+id/button18"
    android:layout_below="@+id/button11"
    android:layout_alignParentStart="true" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/dot"
    android:id="@+id/button19"
    android:layout_below="@+id/button13"
    android:layout_alignStart="@+id/button13" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/eq"
    android:id="@+id/button20"
```

```

    android:layout_alignBottom="@+id/button19"
    android:layout_alignStart="@+id/button15" />

<Button
    android:layout_width="90dp"
    android:layout_height="50dp"
    android:text="@string/plus"
    android:id="@+id/button21"
    android:layout_below="@+id/button15"
    android:layout_toEndOf="@+id/button15" />

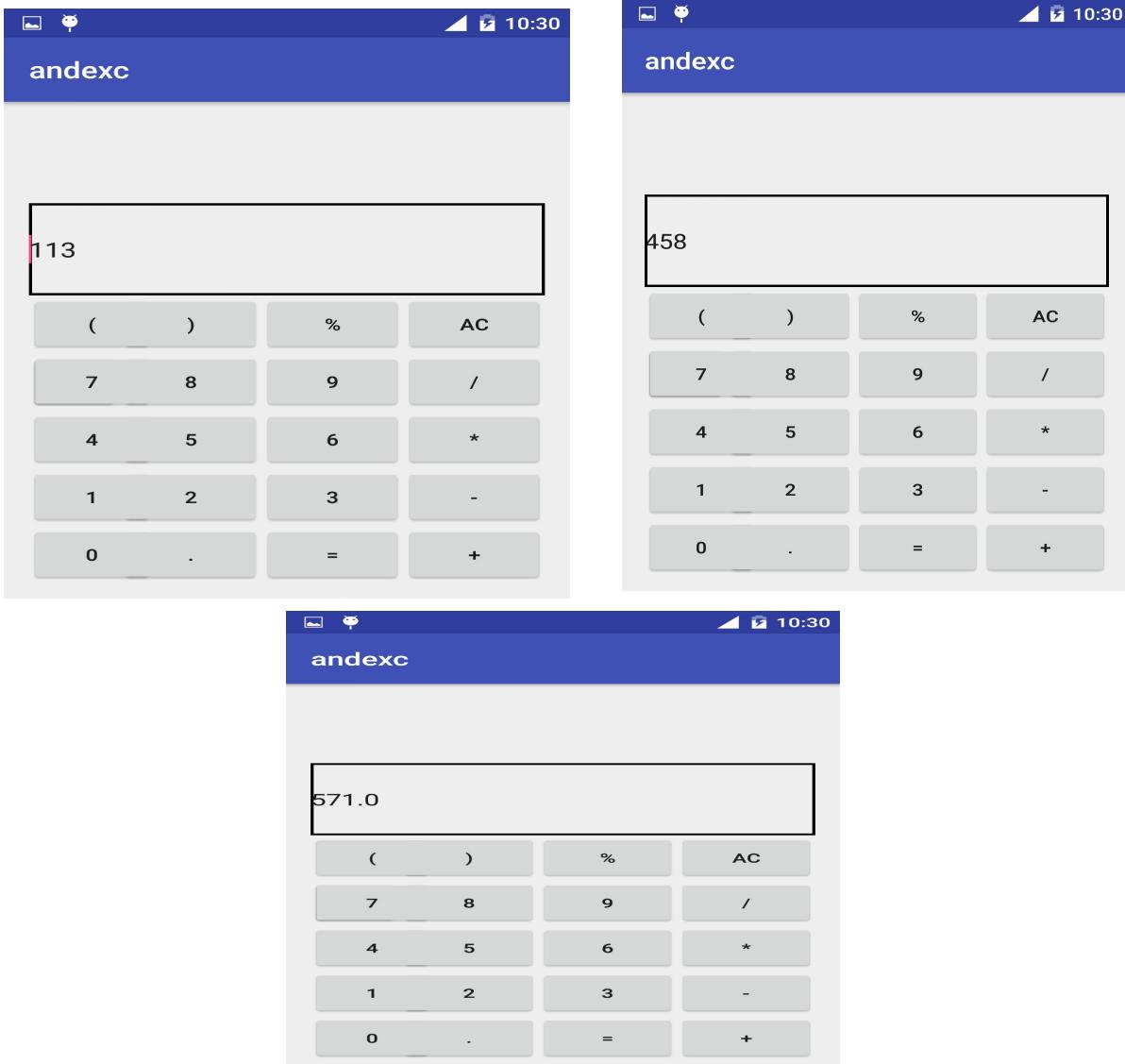
<EditText
    android:layout_width="fill_parent"
    android:layout_height="80dp"
    android:background="@drawable/border"
    android:id="@+id/textView"
    android:layout_above="@+id/button2"
    android:layout_alignParentStart="true" />

</RelativeLayout>

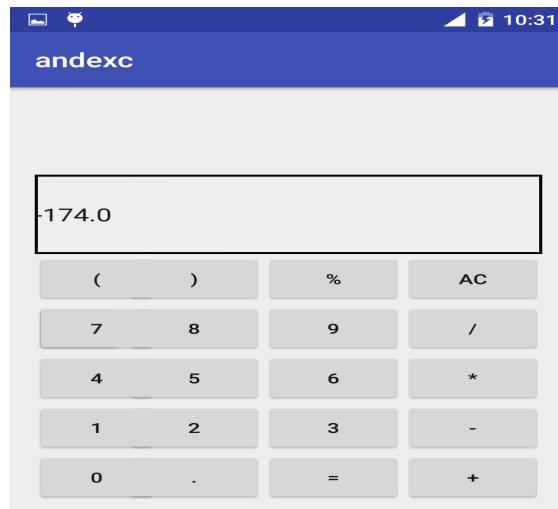
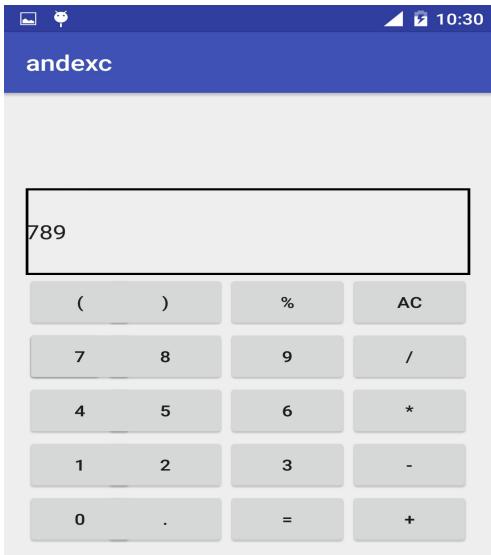
```

OUTPUT:

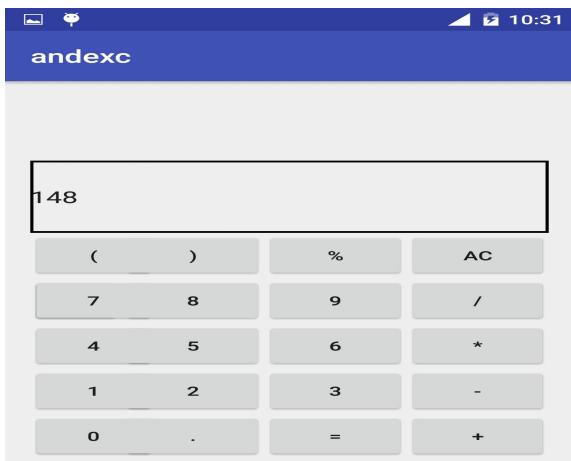
ADDITION:

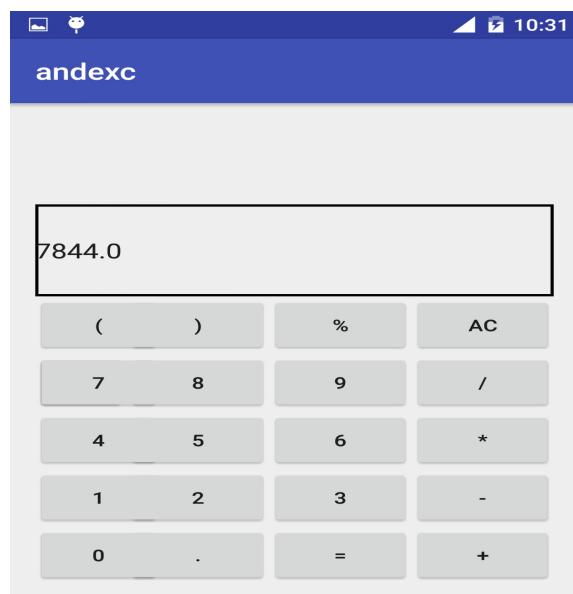


SUBTRACTION:

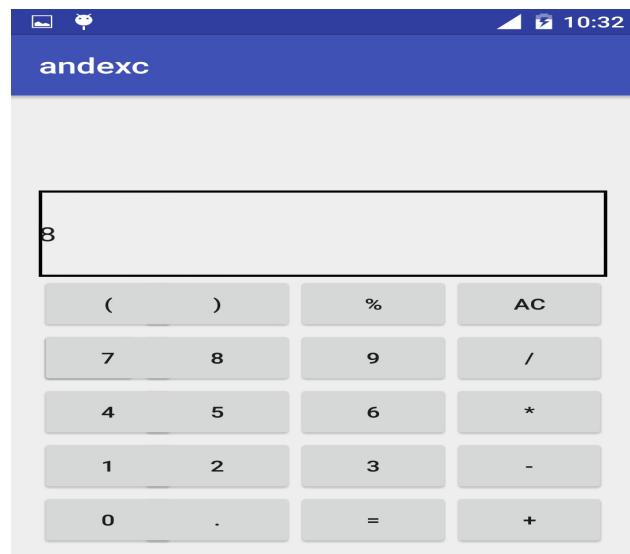


MULTIPLICATION:

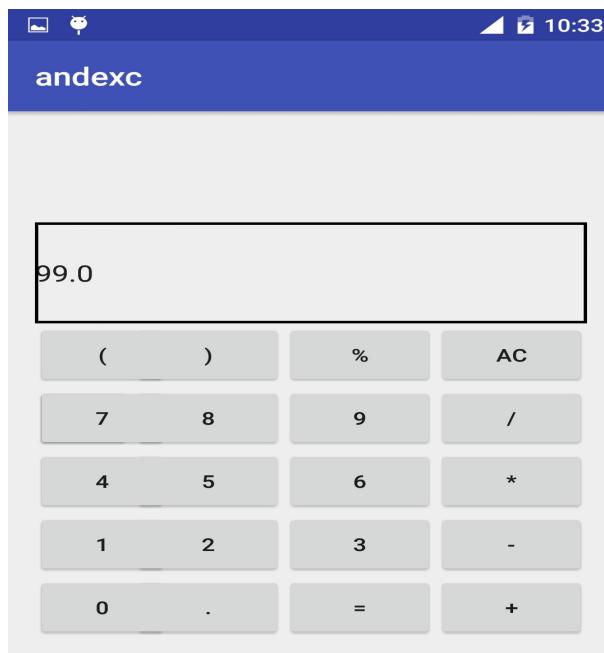
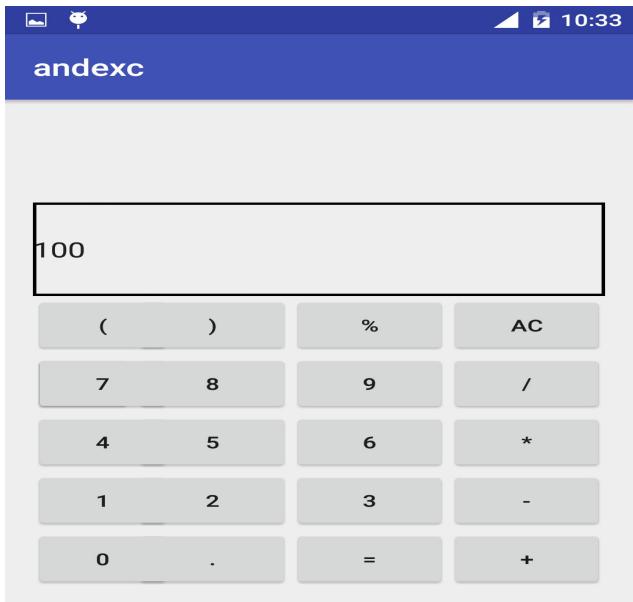




DIVISION:



MODULO:



RESULT:

Thus a calculator application has been developed using android studio.

EXERCISE-4

MainActivity.java

```
package com.example.sel_51.ssnassignment4;
import android.content.Intent;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

    }

    public void onClickAnimation(View v)
    {
        startActivity(new Intent(MainActivity.this,AnimationPage.class));
    }

    public void onClickPicture(View v)
    {
        startActivity(new Intent(MainActivity.this,PicturePage.class));
    }
}
```

AnimationPage.java

```
package com.example.sel_51.ssnassignment4;

import android.content.Context;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.os.Bundle;
import android.os.Handler;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.view.Menu;
import android.view.MenuItem;

public class AnimationPage extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(new MyView(this));
    }

    public class MyView extends View {
        public MyView(Context context) {
            super(context);
            // TODO Auto-generated constructor stub
        }
    }
}
```

```

int x = getWidth();
int y = getHeight() + 800;

@Override
protected void onDraw(final Canvas canvas)
{ // TODO Auto-generated method stub
super.onDraw(canvas);
int i;
int radius;
radius = 100;
final Paint paint = new Paint();
paint.setStyle(Paint.Style.FILL);
paint.setColor(Color.WHITE);
canvas.drawPaint(paint); paint.setARGB(255,
0, 0, 0); canvas.drawColor(Color.WHITE);
canvas.drawCircle(x / 4 - 100, y / 2, 25,
paint); canvas.drawCircle(x / 4 + 50, y / 2, 25,
paint); paint.setARGB(255, 0, 200, 0);

canvas.drawRect(x / 4 - 150, y / 2 - 75, x / 4 + 100, y / 2 - 25,
paint); paint.setARGB(255, 200, 200, 0);
canvas.drawRect(x / 4 - 100, y / 2 - 100, x / 4 + 50, y / 2 - 50, paint);
paint.setARGB(255, 0, 200, 200);
canvas.drawRect(x / 4 - 75, y / 2 - 100, x / 4 - 50, y / 2 - 50,
paint); paint.setARGB(255, 0, 200, 200);
canvas.drawRect(x / 4 - 35, y / 2 - 100, x / 4 + 15, y / 2 - 50 , paint);

try {
    Thread.sleep(250,0);
} catch (InterruptedException e)
{ e.printStackTrace();
}
x += 400;
invalidate();
}

}

```

PicturePage.java

```

package com.example.sel_51.ssnassignment4;

import android.os.Bundle;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.ImageView;

public class PicturePage extends AppCompatActivity {

    ImageView imageView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

```

```

setContentView(R.layout.activity_picture_page);
Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
setSupportActionBar(toolbar);

FloatingActionButton fab = (FloatingActionButton) findViewById(R.id.fab);
fab.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Snackbar.make(view, "Replace with your own action", Snackbar.LENGTH_LONG)
            .setAction("Action", null).show();
    }
});
getSupportActionBar().setDisplayHomeAsUpEnabled(true);

imageView = (ImageView) findViewById(R.id.image);
}

public void onClickRotate(View v)
{
    imageView.setRotation((imageView.getRotation() + 90) % 360);
}

public void onClickZoom(View v)
{
    imageView.setMaxWidth(imageView.getMaxWidth() * 2);
    imageView.setMaxHeight(imageView.getMaxHeight() * 2);
    imageView.setScaleX(imageView.getScaleX() * 1.2f);
    imageView.setScaleY(imageView.getScaleY() * 1.2f);
}
}

```

content_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="com.example.sel_51.ssnassignment4.MainActivity"
    tools:showIn="@layout/activity_main">

    <Button
        android:id="@+id/animation_button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Animation Page"
        android:onClick="onClickAnimation"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

```

```
        android:text="Picture Page"
        android:layout_below="@+id/animation_button"
        android:onClick="onClickPicture"
        android:layout_centerHorizontal="true"/>

    </RelativeLayout>

content_picture_page.xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="com.example.sel_51.ssnassignment4.PicturePage"
    tools:showIn="@layout/activity_picture_page">

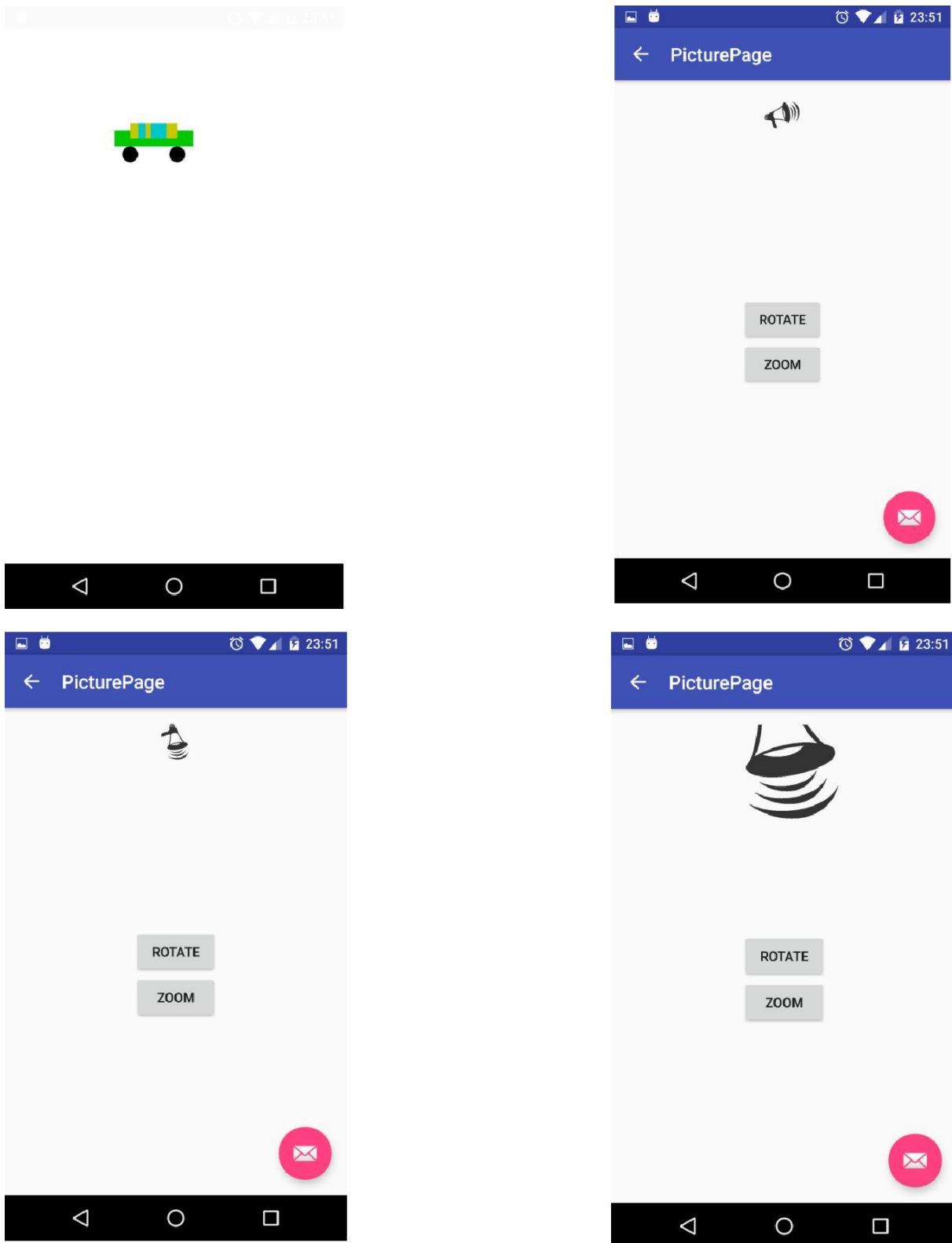
    <ImageView android:layout_width="40dp"
        android:layout_height="40dp"
        android:id="@+id/image"
        android:layout_centerHorizontal="true"
        android:src="@drawable/newsletter"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:id="@+id/rotate_button"
        android:text="Rotate"
        android:onClick="onClickRotate"/>

    <Button android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/rotate_button"
        android:layout_centerHorizontal="true"
        android:id="@+id/zoom_button"
        android:text="Zoom"
        android:onClick="onClickZoom"/>

</RelativeLayout>
```

OUTPUTS:



EXERCISE-5

MainActivity.java

```
package lab.mobile.exercise5;
import android.content.Intent;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        Button insert = (Button) findViewById(R.id.insert);
        Button edit = (Button) findViewById(R.id.edit);
        Button delete = (Button) findViewById(R.id.delete);
        Button display = (Button) findViewById(R.id.display);

        insert.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(MainActivity.this,
                        FirstActivity.class); startActivity(i);
            }
        });

        display.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(MainActivity.this,Display.class);
                startActivity(i);
            }
        });

        edit.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(MainActivity.this,SecondActivity.class);
                startActivity(i);
            }
        });

        delete.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(MainActivity.this,Delete.class);
                startActivity(i);
            }
        });
    }
}
```

FirstActivity.java

```
package lab.mobile.exercise5;

import android.content.ContentValues;
import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class FirstActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_first);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        Button reset = (Button) findViewById(R.id.reset);
        Button submit = (Button) findViewById(R.id.submit);
        final EditText name = (EditText) findViewById(R.id.editName);
        final EditText mob = (EditText) findViewById(R.id.editMob);
        final EditText email = (EditText) findViewById(R.id.editEmail);
        final EditText address = (EditText) findViewById(R.id.editAdd);

        final SQLiteDatabase db = openOrCreateDatabase("Students_Information",SQLiteDatabase.CREATE_IF_NECESSARY,null);
        try {
            db.execSQL("CREATE TABLE Student(Name VARCHAR,Address VARCHAR,Email VARCHAR,Mobile NUMBER);");
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
        reset.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(FirstActivity.this,MainActivity.class);
                startActivity(i);
            }
        });
        submit.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v) {
                try {
                    String n = name.getText().toString();
                    String ph = mob.getText().toString();
                    String e = email.getText().toString();
                }
                catch (Exception e)
                {
                    e.printStackTrace();
                }
            }
        });
    }
}
```

```

        String ad = address.getText().toString();

        ContentValues values = new ContentValues();
        values.put("Name", n); values.put("Address",
        ad); values.put("Email", e);
        values.put("Mobile", ph);

        // Inserting Row

        // mydatabase.execSQL("INSERT INTO TutorialsPoint VALUES('admin','admin');");
        db.insert("Student", null, values);

        Toast.makeText(FirstActivity.this, "Inserted", Toast.LENGTH_LONG).show();
    }
    catch (Exception e)
    {
        e.printStackTrace();
    }

}

});

}

}

```

```

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    // Handle action bar item clicks here. The action bar will
    // automatically handle clicks on the Home/Up button, so long
    // as you specify a parent activity in AndroidManifest.xml.
    int id = item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id == R.id.action_settings) {
        return true;
    }

    return super.onOptionsItemSelected(item);
}

```

SecondActivity.java

```
package lab.mobile.exercise5;
```

```

import android.content.ContentValues;
import android.content.Context;
import android.content.SharedPreferences;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v7.app.AppCompatActivity;

```

```

import android.support.v7.widget.Toolbar;
import android.text.style.UpdateAppearance;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class SecondActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        final EditText name = (EditText) findViewById(R.id.editName1);
        final EditText name2 = (EditText) findViewById(R.id.editName2);
        final EditText mob = (EditText) findViewById(R.id.editMob1);
        final EditText email = (EditText) findViewById(R.id.editEmail1);
        final EditText address = (EditText) findViewById(R.id.editAdd1);
        Button ok = (Button) findViewById(R.id.ok);
        Button update = (Button) findViewById(R.id.edit_name);

        ok.setOnClickListener(new
            View.OnClickListener() { @Override
            public void onClick(View v)
            {
                SQLiteDatabase db;
                db = openOrCreateDatabase( "Students_Information", SQLiteDatabase.CREATE_IF_NECESSARY , null );
                try {

                    String n = name.getText().toString();
                    String query = "Select * from Student Where Name = \'" + n + "\'";
                    Cursor rs = db.rawQuery(query,null);

                    if(rs.getCount()>0) {
                        rs.moveToFirst();

                        Toast.makeText(SecondActivity.this,"row available",Toast.LENGTH_LONG).show();
                        name2.setText(rs.getString(0));
                        mob.setText(rs.getString(3));
                        email.setText(rs.getString(2));
                        address.setText(rs.getString(1));
                    }
                    else
                        Toast.makeText(SecondActivity.this,"row unavailable",Toast.LENGTH_LONG).show();
                }
                catch (Exception e)
                {
                    e.printStackTrace();
                }
                db.close();
            }
        });
    }
}

```

```

    });

update.setOnClickListener(new
    View.OnClickListener(){ @Override
    public void onClick(View v)
    {
        SQLiteDatabase db;
        db = openOrCreateDatabase( "Students_Information", SQLiteDatabase.CREATE_IF_NECESSARY , null );
        try {

            String n = name2.getText().toString();
            String ph = mob.getText().toString();
            String e = email.getText().toString();
            String ad = address.getText().toString();
            ContentValues updatevalues = new ContentValues();

            updatevalues.put("Address", ad);
            updatevalues.put("Email", e);
            updatevalues.put("Mobile", ph);

            db.update("Student", updatevalues, "Name =?", new String[]{n});
        }
        catch(Exception e)
        {
            e.printStackTrace();
        }
        db.close();
    }
});

}

}

Display.java
package lab.mobile.exercise5;

import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

import java.util.ArrayList;
import java.util.List;

public class Display extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_display);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);

```

```

setSupportActionBar(toolbar);

List<String> name = new ArrayList<String>();

SQLiteDatabase db;
db = openOrCreateDatabase( "Students_Information", SQLiteDatabase.CREATE_IF_NECESSARY , null );
try {

    Cursor rs = db.rawQuery("Select * from
Student",null); rs.moveToFirst();

    if(rs.getCount()>0 {
        Toast.makeText(Display.this, "rows available", Toast.LENGTH_LONG).show();

        name.add("Name:" + rs.getString(0) + "\nAddress:" + rs.getString(1) + "\nEmail:" + rs.getString(2) + "\nMobile:" +
rs.getString(3));

        while (!rs.isLast()) {

            rs.moveToNext();
            name.add("Name:" + rs.getString(0) + "\nAddress:" + rs.getString(1) + "\nEmail:" + rs.getString(2) + "\nMobile:" +
rs.getString(3));
        }
    }

    else
    {
        Toast.makeText(Display.this, "rows not available", Toast.LENGTH_LONG).show();
    }
}

catch (Exception e) {
    Toast.makeText(Display.this, "ERROR "+e.toString(), Toast.LENGTH_LONG).show();
}

ArrayAdapter nameAdapter = new ArrayAdapter<String>(Display.this, R.layout.simple_spinner_item, name);

ListView lv = (ListView)findViewById(R.id.namerec);
lv.setAdapter(nameAdapter);

}

public void Home(View view)
{
    Intent i = new Intent(this,MainActivity.class);
    startActivity(i);
}

}

Delete.java
package lab.mobile.exercise5;

import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;

```

```

import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class Delete extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_delete);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        final EditText name = (EditText) findViewById(R.id.delete_name);
        Button button = (Button) findViewById(R.id.button);
        Button button2 = (Button) findViewById(R.id.button2);

        button.setOnClickListener(new View.OnClickListener()
        { @Override
            public void onClick(View v) {

                SQLiteDatabase db;
                db = openOrCreateDatabase( "Students_Information", SQLiteDatabase.CREATE_IF_NECESSARY , null );
                try {
                    String n = name.getText().toString();
                    db.delete("Student", "Name = ?", new String[]{n});
                }
                catch(Exception e)
                {
                    e.printStackTrace();
                }
            }
        });
    }

    button2.setOnClickListener(new View.OnClickListener()
    { @Override
        public void onClick(View v) {

            Intent i = new Intent(Delete.this,
            MainActivity.class); startActivity(i);

        }
    });
}

content_main.xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"

```

```
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="lab.mobile.exercise5.MainActivity"
    tools:showIn="@layout/activity_main">

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:id="@+id/linearLayout"
        android:layout_centerInParent="true">

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="INSERT"
            android:backgroundTint="@android:color/holo_blue_dark"
            android:id="@+id/insert"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="DISPLAY"
            android:backgroundTint="@android:color/holo_blue_dark"
            android:id="@+id/display"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="EDIT"
            android:backgroundTint="@android:color/holo_blue_dark"
            android:id="@+id/edit"/>

        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="DELETE"
            android:backgroundTint="@android:color/holo_blue_dark"
            android:id="@+id/delete"/>
    </LinearLayout>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="16dp"
        android:text="WELCOME"
        android:layout_gravity="center_horizontal"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="22dp" />
</RelativeLayout>

content_first.xml
<?xml version="1.0" encoding="utf-8"?>
```

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="lab.mobile.exercise5.FirstActivity"
    tools:showIn="@layout/activity_first">

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:id="@+id/lay1">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="NAME: "
            android:id="@+id/nameText"
            android:textSize="16sp"/>

        <EditText
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:id="@+id/editName"
            android:hint="@string/name_text"/>
    </LinearLayout>

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:id="@+id/lay3"
        android:layout_below="@+id/lay1">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="ADDRESS: "
            android:id="@+id/addText"
            android:textSize="16sp"/>

        <EditText
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:id="@+id/editAdd"
            android:inputType="textMultiLine"
            android:hint="@string/address_text"/>
    </LinearLayout>

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
    android:orientation="horizontal"
    android:id="@+id/lay4"
    android:layout_below="@+id/lay3">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="EMAIL: "
        android:id="@+id/emailText"
        android:textSize="16sp"/>

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/editEmail"
        android:inputType="textEmailAddress"
        android:hint="@string/email_text"/>
</LinearLayout>

<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:id="@+id/lay5"
    android:layout_below="@+id/lay4">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="MOBILE: "
        android:id="@+id/mobText"
        android:textSize="16sp"/>

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/editMob"
        android:inputType="number"
        android:hint="@string/mob_text"/>
</LinearLayout>

<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:paddingTop="40dp"
    android:paddingLeft="90dp"
    android:id="@+id/lay8"
    android:layout_below="@+id/lay5">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/reset"
        android:text="HOME" />

    <Button
```

```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/submit"
        android:text="SUBMIT"/>
    </LinearLayout>
</RelativeLayout>

content_second.xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="lab.mobile.exercise5.SecondActivity"
    tools:showIn="@layout/activity_second">

    <TableLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">

        <TableRow>
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="NAME: "
                android:textSize="16sp"
                android:layout_column="1" />

            <EditText
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:id="@+id/editName1"
                android:width="250dp"/>
        </TableRow>

        <TableRow>
            <Button
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_column="2"
                android:text="OK"
                android:id="@+id/ok"/>
        </TableRow>

        <TableRow>
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="NAME: "
                android:textSize="16sp"
                android:layout_column="1" />
    
```

```
<EditText
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/editName2"
    android:width="250dp"/>
</TableRow>

<TableRow>
<TextView
    android:text="ADDRESS"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="1" />
<EditText
    android:width="200dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/editAdd1"/>
</TableRow>

<TableRow>
<TextView
    android:text="EMAIL"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="1" />
<EditText
    android:width="200dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/editEmail1"/>
</TableRow>

<TableRow>
<TextView
    android:text="MOBILE"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="1" />
<EditText
    android:width="200dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/editMob1"/>
</TableRow>

<TableRow>
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_column="2"
    android:text="UPDATE"
    android:id="@+id/edit_name"/>
</TableRow>

</TableLayout>

</RelativeLayout>
```

```

content_display.xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="lab.mobile.exercise5.Display"
    tools:showIn="@layout/activity_display">

    <ListView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/namerec">
    </ListView>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="Home"
        android:text="HOME"
        android:id="@+id/home"
        android:layout_below="@id/namerec"
        android:layout_gravity="center_horizontal" />

</RelativeLayout>

content_delete.xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="lab.mobile.exercise5.Delete"
    tools:showIn="@layout/activity_delete">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name: "
        android:textSize="20dp"
        android:id="@+id/textView" />

    <EditText
        android:layout_width="wrap_content"

```

```

        android:layout_height="wrap_content"
        android:text="Enter Name to be deleted"
        android:id="@+id/delete_name"
        android:hint="@string/delete_name"
        android:layout_toRightOf="@+id/textView"/>

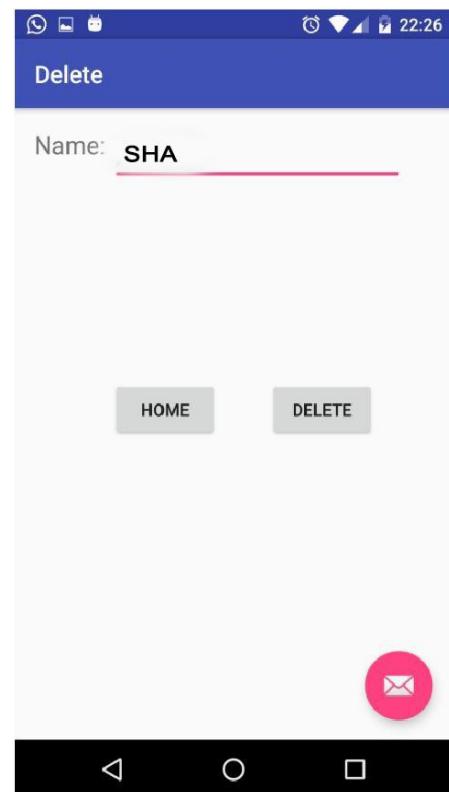
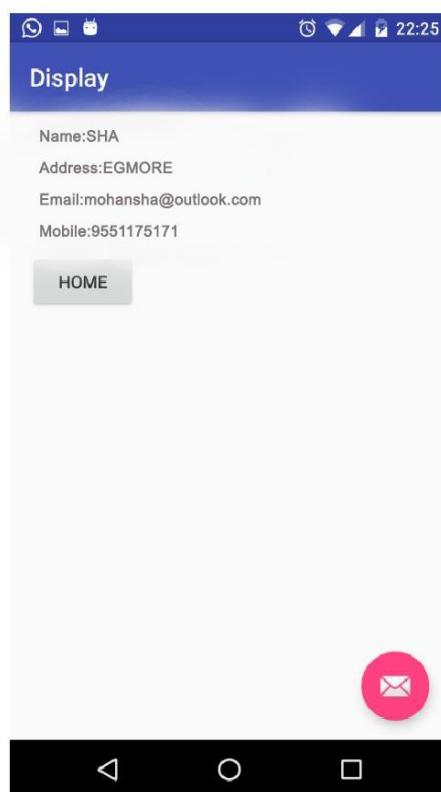
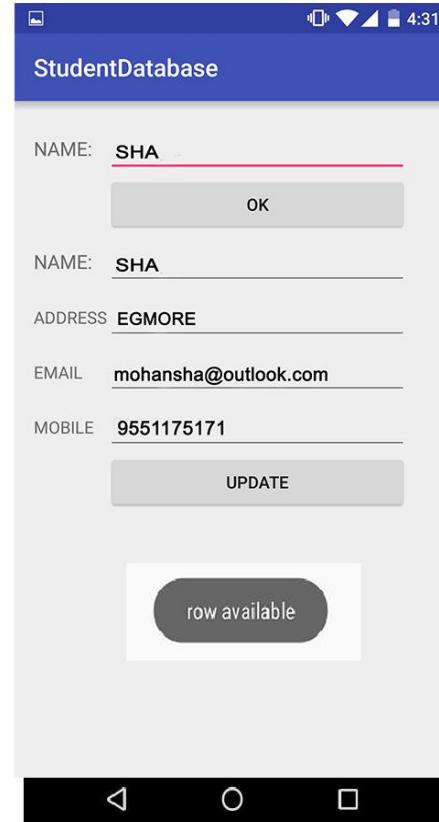
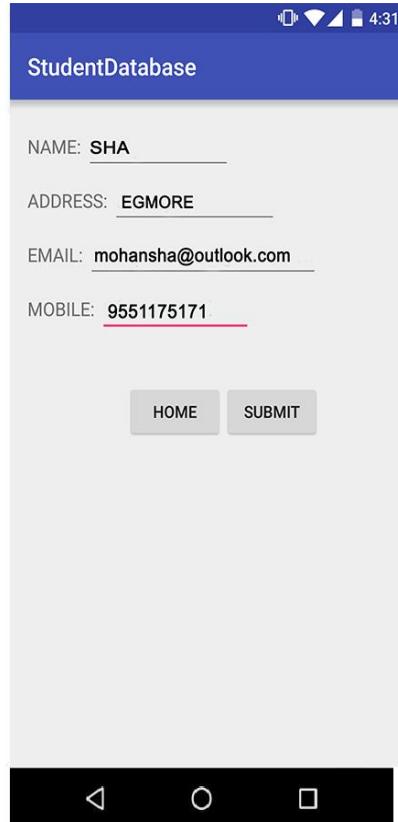
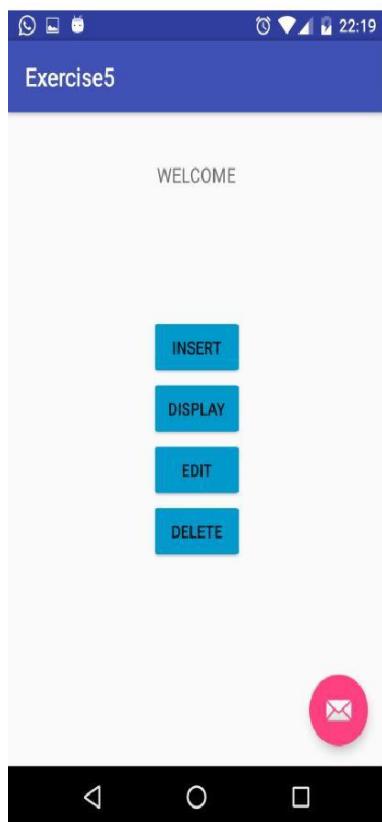
<Button android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Delete"
        android:onClick="Delete"
        android:id="@+id/button"
        android:layout_marginLeft="41dp"
        android:layout_marginStart="41dp"
        android:layout_marginTop="159dp"
        android:layout_below="@+id/delete_name"
        android:layout_toRightOf="@+id/button2"
        android:layout_toEndOf="@+id/button2" />

<Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Home"
        android:onClick="Home"
        android:id="@+id/button2"
        android:layout_alignTop="@+id/button"
        android:layout_alignLeft="@+id/delete_name"
        android:layout_alignStart="@+id/delete_name" />

</RelativeLayout>

simple_spinner_item.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Single List Item Design -->

<TextView xmlns:android="http://schemas.android.com/apk/res/android"
        android:id="@+id/label"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:padding="10dip"
        android:textSize="16dip"
        android:textStyle="bold" >
</TextView>
```

OUTPUTS:

EXCERISE-6

RssActivity.java

```
package com.example.rssfeed;

import java.util.List;
import android.app.Activity;
import android.os.AsyncTask;
import android.os.Bundle;
import android.util.Log;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import com.example.lohitrss.RssItem;
import com.example.lohitrss.ListListener;
import com.example.lohitrss.RssReader;

public class RssActivity extends Activity {

    // A reference to the local object
    private RssActivity local;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        // Set view
        setContentView(R.layout.activity_rss);

        // Set reference to this activity
        local = this;

        GetRSSDataTask task = new GetRSSDataTask();

        // Start download RSS task
        task.execute("http://www.feedforall.com/sample-feed.xml");

        // Debug the thread name
        Log.d("ITCRssReader", Thread.currentThread().getName());
    }

    private class GetRSSDataTask extends AsyncTask<String, Void, List<RssItem> >
    { @Override
        protected List<RssItem> doInBackground(String... urls) {

            // Debug the task thread name
            Log.d("ITCRssReader", Thread.currentThread().getName());

            try {
                // Create RSS reader
                RssReader rssReader = new RssReader(urls[0]);

                // Parse RSS, get items
                return rssReader.getItems();

            } catch (Exception e) {
                Log.e("ITCRssReader", e.getMessage());
            }

            return null;
        }
    }
}
```

```

@Override
protected void onPostExecute(List<RssItem> result) {

    // Get a ListView from main view
    ListView itcItems = (ListView) findViewById(R.id.listMainView);

    // Create a list adapter
    ArrayAdapter<RssItem> adapter = new ArrayAdapter<RssItem>(local, android.R.layout.simple_list_item_1, result);
    // Set list adapter for the ListView
    itcItems.setAdapter(adapter);

    // Set list view item click listener
    itcItems.setOnItemClickListener(new ListListener(result, local));
}
}
}

```

RssItem.java

```

package com.example.rssfeed;

public class RssItem {
    // item title
    private String title;
    // item link
    private String link;
    public String getTitle() {
        return title;
    }
    public void setTitle(String title) {
        this.title = title;
    }
    public String getLink() {
        return link;
    }
    public void setLink(String link) {
        this.link = link;
    }
    @Override
    public String toString() {
        return title;
    }
}

```

RssParseHandler.java package com.example.rssfeed;

```

import java.util.ArrayList;
import java.util.List;
import org.xml.sax.Attributes;
import org.xml.sax.SAXException;
import org.xml.sax.helpers.DefaultHandler;
import com.example.lohit.rssfeed.RssItem;

public class RssParseHandler extends DefaultHandler {

    // List of items parsed
    private List<RssItem> rssItems;
    // We have a local reference to an object which is constructed while parser is working on an item tag

```

```

// Used to reference item while parsing
private RssItem currentItem;
// We have two indicators which are used to differentiate whether a tag title or link is being processed by the parser
// Parsing title indicator
private boolean parsingTitle;
// Parsing link indicator
private boolean parsingLink;

public RssParseHandler() {
    rssItems = new ArrayList();
}

// We have an access method which returns a list of items that are read from the RSS feed. This method will be called when
parsing is done.
public List<RssItem> getItems() {
    return rssItems;
}

// The StartElement method creates an empty RssItem object when an item start tag is being processed. When a title or link
tag are being processed appropriate indicators are set to true.
@Override
public void startElement(String uri, String localName, String qName, Attributes attributes) throws SAXException {
    if ("item".equals(qName)) {
        currentItem = new RssItem();
    } else if ("title".equals(qName)) {
        parsingTitle = true;
    } else if ("link".equals(qName)) {
        parsingLink = true;
    }
}

// The EndElement method adds the current RssItem to the list when a closing item tag is processed. It sets appropriate
indicators to false - when title and link closing tags are processed
@Override
public void endElement(String uri, String localName, String qName) throws SAXException {
    if ("item".equals(qName)) {
        rssItems.add(currentItem);
        currentItem = null;
    } else if ("title".equals(qName)) {
        parsingTitle = false;
    } else if ("link".equals(qName)) {
        parsingLink = false;
    }
}

// Characters method fills current RssItem object with data when title and link tag content is being
processed
@Override
public void characters(char[] ch, int start, int length) throws SAXException {
    if (parsingTitle) {
        if (currentItem != null)
            currentItem.setTitle(new String(ch, start,
length)); } else if (parsingLink) {
        if (currentItem != null) {
            currentItem.setLink(new String(ch, start,
length)); parsingLink = false;
        }
    }
}
}

```

RssReader.java

```
package com.example.rssfeed;
```

```

import java.util.List;
import javax.xml.parsers.SAXParser; import
javax.xml.parsers.SAXParserFactory;
import com.example.lohith.rssfeed.RssItem;

/**
 * Class reads RSS data.
 * @author ITCuties
 */
public class RssReader {
    // Our class has an attribute which represents RSS Feed URL
    private String rssUrl;
    /**
     * We set this URL with the constructor
     */
    public RssReader(String rssUrl)
    { this.rssUrl = rssUrl;
    }
    /**
     * Get RSS items. This method will be called to get the parsing process result.
     * @return
     */
    public List<RssItem> getItems() throws Exception {
        // At first we need to get an SAX Parser Factory object
        SAXParserFactory factory = SAXParserFactory.newInstance();
        // Using factory we create a new SAX Parser instance
        SAXParser saxParser = factory.newSAXParser();
        // We need the SAX parser handler object
        RssParseHandler handler = new RssParseHandler();
        // We call the method parsing our RSS Feed
        saxParser.parse(rssUrl, handler);
        // The result of the parsing process is being stored in the handler object
        return handler.getItems();
    }
}

```

ListListener.java

```

package com.example.lohith.rssfeed;

import java.util.List;
import android.app.Activity;
import android.content.Intent;
import android.net.Uri; import
android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import com.example.lohith.rssfeed.RssItem;
public class ListListener implements OnItemClickListener {
    // Our listener will contain a reference to the list of RSS Items
    // List item's reference
    List<RssItem> listItems;
    // And a reference to a calling activity
    // Calling activity reference
    Activity activity;
    /** We will set those references in our constructor.*/
    public ListListener(List<RssItem> aListItems, Activity anActivity) {
        listItems = aListItems;
        activity = anActivity;
    }
}

```

```
}

public void onItemClick(AdapterView parent, View view, int pos, long id) {
    // We create an Intent which is going to display data
    Intent i = new Intent(Intent.ACTION_VIEW);
    // We have to set data for our new Intent
    i.setData(Uri.parse(listItems.get(pos).getLink()));
    // And start activity with our Intent
    activity.startActivity(i);
}
}
```

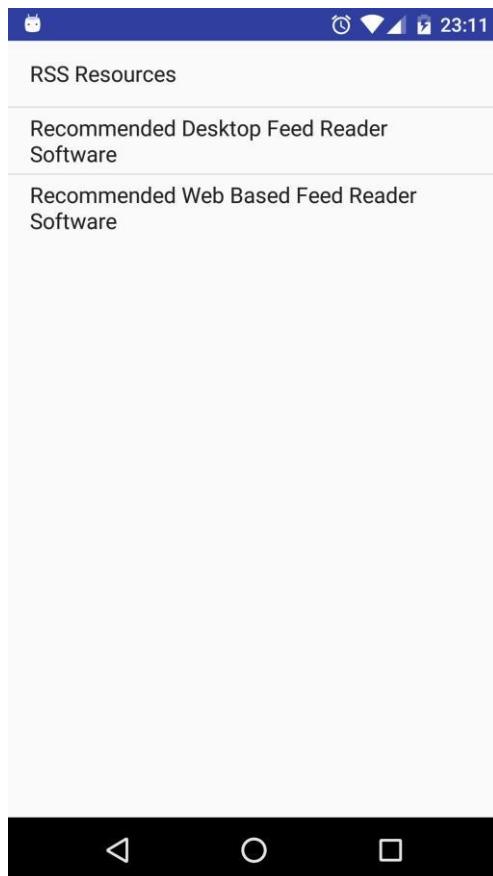
activity_rss.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <ListView
        android:id="@+id/listMainView"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" >
    </ListView>

</LinearLayout>
```

OUTPUT



EXERCISE-7

MainActivity.java

```
package sha.exercise7;
```

```
import android.graphics.Color;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.Menu; import
android.view.MenuItem; import
android.view.View; import
android.widget.TextView;

import java.util.Random;

public class MainActivity extends AppCompatActivity {

    TextView text;
    String string;
    boolean running=false;
    int color[]={Color.RED,Color.GREEN,Color.BLUE,Color.BLACK,Color.GRAY,Color.CYAN,Color.MAGENTA};
    Random rand = new Random();
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);
        text = (TextView)findViewById(R.id.text);
        string = text.getText().toString();

    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.menu_main, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        // Handle action bar item clicks here. The action bar will
        // automatically handle clicks on the Home/Up button, so long
        // as you specify a parent activity in AndroidManifest.xml.
        int id = item.getItemId();

        //noinspection SimplifiableIfStatement
        if (id == R.id.action_settings) {
            return true;
        }

        return super.onOptionsItemSelected(item);
    }

    public void onClick(View v)
    {
        if(running==false)}
```

```

running=true;
new Thread()
{ @Override
public void run()
{ try {
while(true) {
sleep(250);
runOnUiThread(new Runnable()
{ @Override
public void run() {
string = string.substring(1) + string.charAt(0);
text.setTextColor(color[rand.nextInt(7)]);
text.setText(string);
}
});
if(running==false)
break;
}
}
catch (Exception e) {
;
}
}.start();
}
else
running=false;
}
}

```

content_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="sha.exercise5.MainActivity"
    tools:showIn="@layout/activity_main">

<TextView
    android:id="@+id/text"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    android:gravity="center"
    android:textSize="30sp"/>
<Button
    android:id="@+id/button"
    android:layout_below="@id/text"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Toggle"
    
```

```
    android:onClick="onClick"
    android:layout_weight="1"
    android:layout_centerHorizontal="true"/>
</RelativeLayout>
```

OUTPU



EXERCISE-8

MainActivity.java

```
package com.example.sel_44.gps;

import android.content.Context;
import android.location.Location;
import android.location.LocationListener;
import android.location.LocationManager;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        LocationManager locationManager = (LocationManager) getSystemService(Context.LOCATION_SERVICE);

        MyCurrentLoctionListener locationListener = new MyCurrentLoctionListener();

        /*
        try {
            location = locationManager.getLastKnownLocation(LocationManager.GPS_PROVIDER);
        } catch (SecurityException e) {
            dialogGPS(this.getContext()); // lets the user know there is a problem with the gps
        }
    }
}
```

```
try {
    locationManager.requestLocationUpdates(LocationManager.GPS_PROVIDER, 0, 0, locationListener);
}

catch(SecurityException e)
{
    Toast.makeText(this.getApplicationContext(),"Error creating location service: " +
e.getMessage(),Toast.LENGTH_LONG).show();
}

}

public class MyCurrentLoctionListener implements LocationListener {

    @Override
    public void onLocationChanged(Location location) {
        location.getLatitude();
        location.getLongitude();

        String myLocation = "Latitude = " + location.getLatitude() + " Longitude = " + location.getLongitude();
        TextView e=(TextView)findViewById(R.id.Text1);
        e.setText(myLocation);
        //I make a log to see the results
        Log.e("MY CURRENT LOCATION", myLocation);

    }

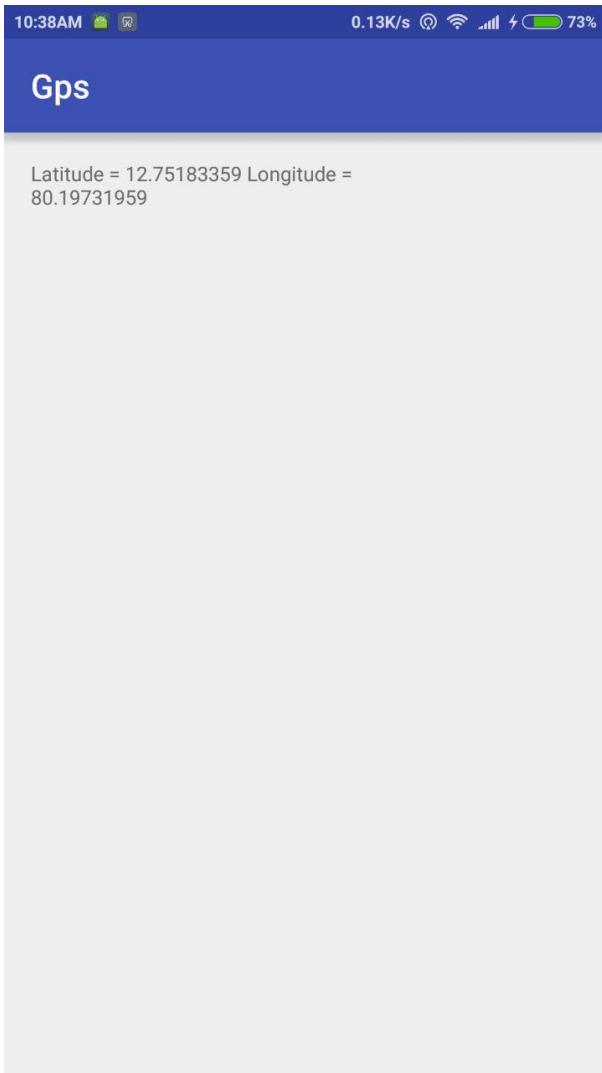
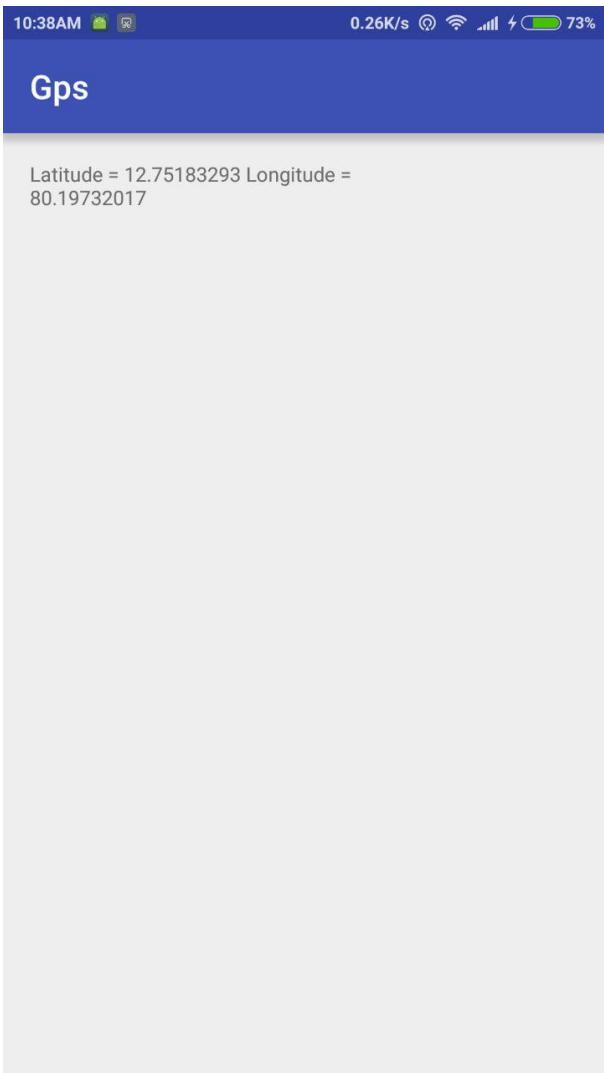
    @Override
    public void onStatusChanged(String s, int i, Bundle bundle) {
}
}
```

```
    @Override
    public void onProviderEnabled(String s) {
    }

    @Override
    public void onProviderDisabled(String s) {
    }
}

activity\_main.xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.sel_44.gps.MainActivity">
    <TextView
        android:layout_width="200dp"
        android:layout_height="200dp"
        android:id="@+id/Text1"
        android:layout_above="@+id/linearLayout"
        android:layout_alignEnd="@+id/linearLayout"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true" />
</LinearLayout>
```

OUTPUT:



EXERCISE-9

MainActivity.java

```
package com.sha.ex9sms;

import android.app.Notification;
import android.app.NotificationManager;
import android.content.Context;
import android.content.SharedPreferences;
import android.support.v4.app.NotificationCompat;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

    EditText etMessage,etNumber;
    ArrayList<String> numbers;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        numbers = new ArrayList<String>();
```

```
etMessage = (EditText) findViewById(R.id.etMessage);
etNumber = (EditText) findViewById(R.id.etNumber);

}

public void MyClick(View v)
{
    int id = v.getId();

    switch (id)
    {
        case R.id.bSend :
            String number = etNumber.getText().toString();
            String message = etMessage.getText().toString();

            int flag = exitForMoreThanTwo(number);

            if(flag==1)
                finish();

        try {
            SmsManager smsManager = SmsManager.getDefault();
            smsManager.sendTextMessage(number, null, message, null, null);

            NotificationCompat.Builder notifBuilder = new NotificationCompat.Builder(this);

```

```
        notifBuilder.setSmallIcon(R.drawable.notification_done);
        notifBuilder.setContentTitle("Done");
        notifBuilder.setContentText("SMS Sent!");

        NotificationManager notifManager = (NotificationManager)
getSystemService(Context.NOTIFICATION_SERVICE);

        notifManager.notify((int)Math.random(),notifBuilder.build());

        numbers.add(number);

    } catch (Exception e){

        NotificationCompat.Builder notifBuilder = new NotificationCompat.Builder(this);

        notifBuilder.setSmallIcon(R.drawable.notification_warning);
        notifBuilder.setContentTitle("Not Done");
        notifBuilder.setContentText("SMS Sending Failed!");

        NotificationManager notifManager = (NotificationManager)
getSystemService(Context.NOTIFICATION_SERVICE);

        notifManager.notify((int) Math.random(), notifBuilder.build());
        e.printStackTrace();
    }

    break;
}
```

```
private int exitForMoreThanTwo(String number) {  
  
    int i;  
    int count = 0;  
  
    for(i=0;i<numbers.size();i++)  
    {  
        if(number==numbers.get(i))  
            count++;  
    }  
  
    if(count>=2)  
        return 1;  
  
    else  
        return 0;  
  
}  
}
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:paddingBottom="@dimen/activity_vertical_margin"  
    android:paddingLeft="@dimen/activity_horizontal_margin"  
    android:paddingRight="@dimen/activity_horizontal_margin"
```

```
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.karuppiyah.ex9sms.MainActivity">
```

```
<EditText
    android:id="@+id/etMessage"
    android:layout_width="match_parent"
    android:layout_height="300sp"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_below="@+id/etNumber"
    android:layout_marginTop="30dp"
    android:ems="10"
    android:hint="Type the message"
    android:inputType="textMultiLine" />
```

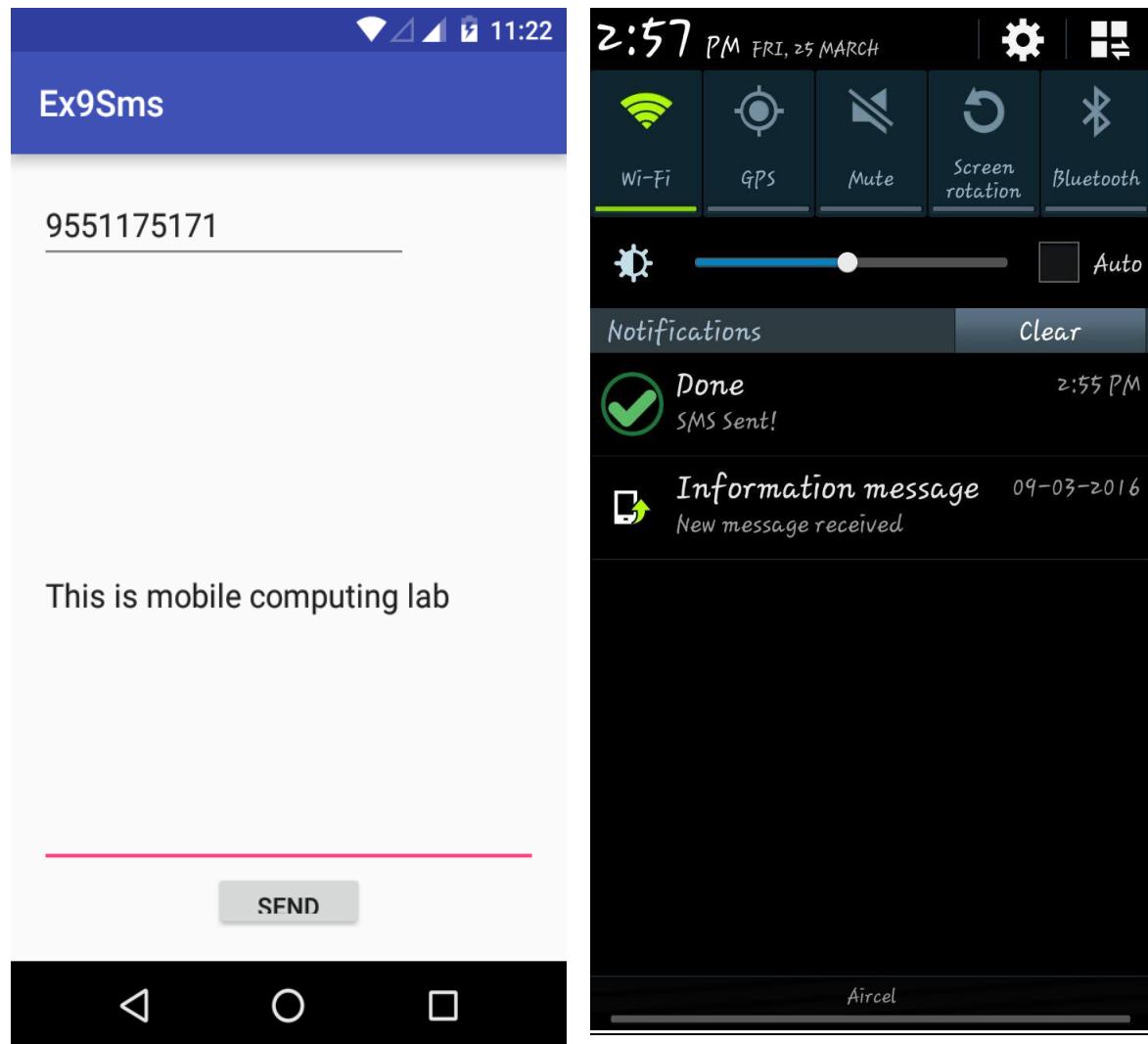
```
<Button
    android:id="@+id/bSend"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/etMessage"
    android:layout_centerHorizontal="true"
    android:onClick="MyClick"
    android:text="Send" />
```

```
<EditText
    android:id="@+id/etNumber"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:ems="10"
    android:hint="Type Number"
    android:inputType="numberDecimal" />

</RelativeLayout>
```

OUTPUT:



EXERCISE-10

MainActivity.java

```
package com.example.sel_47.ex10;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.io.BufferedReader;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.InputStreamReader;
import java.io.OutputStreamWriter;

public class MainActivity extends Activity {

    // GUI controls
    EditText txtData;
    Button btnWriteSDFile;
    Button btnReadSDFile;
    Button btnClearScreen;
    Button btnClose;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

```
setContentView(R.layout.content_main);

// bind GUI elements with local controls

txtData = (EditText) findViewById(R.id.txtData);

txtData.setHint("Enter some lines of data here... ");

btnWriteSDFile = (Button) findViewById(R.id.btnWriteSDFile);

btnWriteSDFile.setOnClickListener(new View.OnClickListener() {

    public void onClick(View v) {

        // write on SD card file data in the text box

        try {

            File myFile = new File("/sdcard/mysdfile.txt");

            myFile.createNewFile();

            FileOutputStream fOut = new FileOutputStream(myFile);

            OutputStreamWriter myOutWriter =

                new OutputStreamWriter(fOut);

            myOutWriter.append(txtData.getText());

            myOutWriter.close();

            fOut.close();

            Toast.makeText(getApplicationContext(),

                "Done writing SD 'mysdfile.txt'",

                Toast.LENGTH_SHORT).show();

        } catch (Exception e) {

            Toast.makeText(getApplicationContext(), e.getMessage(),

                Toast.LENGTH_SHORT).show();

        }

    }// onClick

}); // btnWriteSDFile
```

```
btnReadSDFile = (Button) findViewById(R.id.btnReadSDFile);
btnReadSDFile.setOnClickListener(new View.OnClickListener() {

    public void onClick(View v) {
        // write on SD card file data in the text box
        try {
            File myFile = new File("/sdcard/mysdfile.txt");
            FileInputStream fln = new FileInputStream(myFile);
            BufferedReader myReader = new BufferedReader(
                new InputStreamReader(fln));
            String aDataRow = "";
            String aBuffer = "";
            while ((aDataRow = myReader.readLine()) != null) {
                aBuffer += aDataRow + "\n";
            }
            txtData.setText(aBuffer);
            myReader.close();
            Toast.makeText(getApplicationContext(),
                "Done reading SD 'mysdfile.txt'",
                Toast.LENGTH_SHORT).show();
        } catch (Exception e) {
            Toast.makeText(getApplicationContext(), e.getMessage(),
                Toast.LENGTH_SHORT).show();
        }
    }
}); // onClick
```

```
btnClearScreen = (Button) findViewById(R.id.btnClearScreen);
btnClearScreen.setOnClickListener(new View.OnClickListener() {
```

```
public void onClick(View v) {
    // clear text box
    txtData.setText("");
}

}); // btnClearScreen

btnClose = (Button) findViewById(R.id.btnClose);
btnClose.setOnClickListener(new View.OnClickListener() {

    public void onClick(View v) {
        // clear text box
        finish();
    }
});

}

activity_main.xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.design.widget.CoordinatorLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:fitsSystemWindows="true"
    tools:context="com.example.sel_47.ex10.MainActivity">

    <android.support.design.widget.AppBarLayout
```

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:theme="@style/AppTheme.AppBarOverlay">

<android.support.v7.widget.Toolbar
    android:id="@+id/toolbar"
    android:layout_width="match_parent"
    android:layout_height="?attr/actionBarSize"
    android:background="?attr/colorPrimary"
    app:popupTheme="@style/AppTheme.PopupOverlay" />

</android.support.design.widget.AppBarLayout>
<include layout="@layout/content_main" />
</android.support.design.widget.CoordinatorLayout>
```

content_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    android:id="@+id/widget28"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:background="#FFFF00"
    android:orientation="vertical"
    xmlns:android="http://schemas.android.com/apk/res/android"
    >
<EditText
    android:id="@+id/txtData"
    android:layout_width="fill_parent"
    android:layout_height="180px"
```

```
    android:textSize="18sp" />

<Button
    android:id="@+id	btnWriteSDFile"
    android:layout_width="450px"
    android:layout_height="70px"
    android:text="1. Write SD File"
    android:singleLine="true" />

<Button
    android:id="@+id	btnClearScreen"
    android:layout_width="450px"
    android:layout_height="70px"
    android:text="2. Clear Screen" />

<Button
    android:id="@+id	btnReadSDFile"
    android:layout_width="450px"
    android:layout_height="70px"
    android:text="3. Read SD File" />

<Button
    android:id="@+id	btnClose"
    android:layout_width="450px"
    android:layout_height="70px"
    android:text="4. Close" />

</LinearLayout>
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.sel_47.ex10">

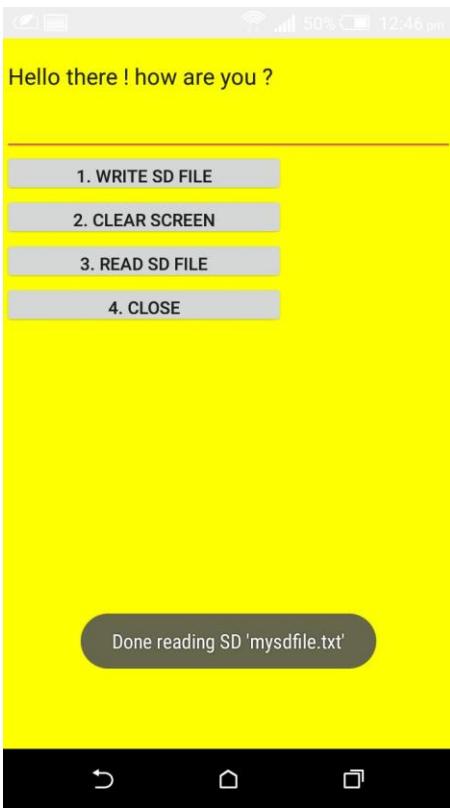
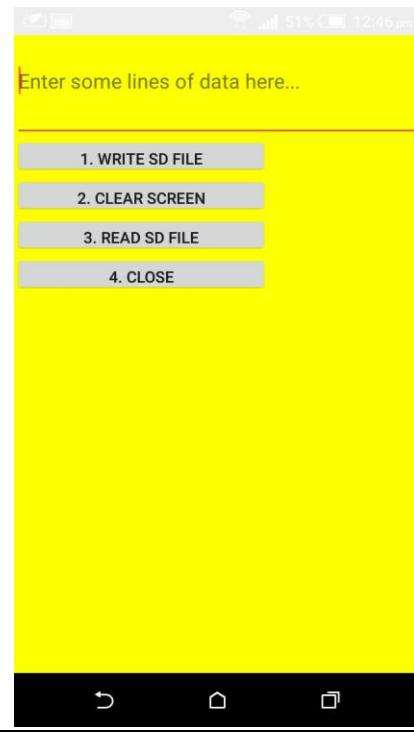
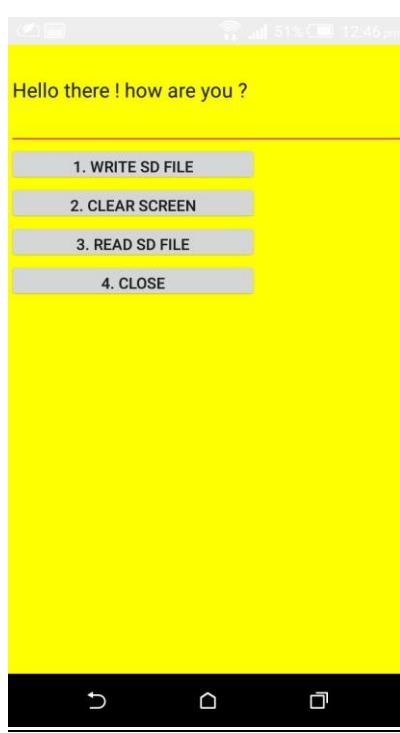
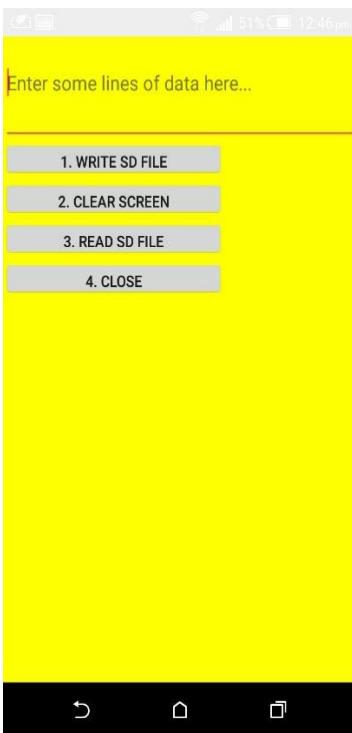
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">

        <activity
            android:name=".MainActivity"
            android:label="@string/app_name"
            android:theme="@style/AppTheme.NoActionBar">

            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

    <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
</uses-permission>
</manifest>
```

OUTPUTS:



EX.NO:11
ALARM CLOCK

MainActivity.java

```
package com.sha.sp_alarm;

import android.app.Activity;
import android.app.AlarmManager;
import android.app.PendingIntent;
import android.content.Intent;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.util.Log;
import android.view.View;
import android.widget.TextView;
import android.widget.TimePicker;
import android.widget.ToggleButton;
import java.util.Calendar;

public class MainActivity extends AppCompatActivity {

    AlarmManager alarmManager;
    private PendingIntent pendingIntent;
    private TimePicker alarmTimePicker;
    private static MainActivity inst;
    private TextView alarmTextView;

    public static MainActivity instance() {
        return inst;
    }

    @Override
    public void onStart() {
        super.onStart();
        inst = this;
    }

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        alarmTimePicker = (TimePicker) findViewById(R.id.alarmTimePicker);
        alarmTextView = (TextView) findViewById(R.id.alarmText);
        ToggleButton alarmToggle = (ToggleButton) findViewById(R.id.alarmToggle);
        alarmManager = (AlarmManager) getSystemService(ALARM_SERVICE);
    }

    public void onToggleClicked(View view) {
        if (((ToggleButton) view).isChecked()) {
            Log.d("MyActivity", "Alarm On");
            Calendar calendar = Calendar.getInstance();
            calendar.set(Calendar.HOUR_OF_DAY, alarmTimePicker.getCurrentHour());
            calendar.set(Calendar.MINUTE, alarmTimePicker.getCurrentMinute());
            Intent myIntent = new Intent(MainActivity.this, AlarmReceiver.class);
            pendingIntent = PendingIntent.getBroadcast(MainActivity.this, 0, myIntent, 0);
            alarmManager.set(AlarmManager.RTC, calendar.getTimeInMillis(), pendingIntent);
        } else {
            alarmManager.cancel(pendingIntent);
            setAlarmText("");
            Log.d("MyActivity", "Alarm Off");
        }
    }

    public void setAlarmText(String alarmText) {
        alarmTextView.setText(alarmText);
    }
}
```

AlarmService.java

```

package com.sha.sp_alarm;

import android.app.IntentService;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;
import android.support.v4.app.NotificationCompat;
import android.support.v7.app.AppCompatActivity;
import android.util.Log;

public class AlarmService extends IntentService {

    private NotificationManager alarmNotificationManager;
    public AlarmService() {
        super("AlarmService");
    }

    @Override
    public void onHandleIntent(Intent intent) {
        sendNotification("Wake Up! Wake Up!");
    }

    private void sendNotification(String msg) {
        Log.d("AlarmService", "Preparing to send notification...: " + msg);
        alarmNotificationManager = (NotificationManager) this
            .getSystemService(Context.NOTIFICATION_SERVICE);

        PendingIntent contentIntent = PendingIntent.getActivity(this, 0,
            new Intent(this, MainActivity.class), 0);

        NotificationCompat.Builder alamNotificationBuilder = new NotificationCompat.Builder(
            this).setContentTitle("Alarm").setSmallIcon(R.drawable.ic_launcher).setStyle(new
                NotificationCompat.BigTextStyle().bigText(msg)).setContentText(msg);

        alamNotificationBuilder.setContentIntent(contentIntent);
        alarmNotificationManager.notify(1, alamNotificationBuilder.build());
        Log.d("AlarmService", "Notification sent.");
    }
}

```

AlarmReceiver.java

```

package com.sha.sp_alarm;

import android.app.Activity;
import android.content.ComponentName;
import android.content.Context;
import android.content.Intent;
import android.media.Ringtone;
import android.media.RingtoneManager;
import android.net.Uri;
import android.support.v4.content.WakefulBroadcastReceiver;
import android.support.v7.app.AppCompatActivity;

public class AlarmReceiver extends WakefulBroadcastReceiver {

    public void onReceive(final Context context, Intent intent) {
        //this will update the UI with message
        MainActivity inst = MainActivity.instance();
        inst.setAlarmText("Alarm! Wake up! Wake up!");

        //this will sound the alarm tone
        //this will sound the alarm once, if you wish to
        //raise alarm in loop continuously then use MediaPlayer and setLooping(true)
        Uri alarmUri = RingtoneManager.getDefaultUri(RingtoneManager.TYPE_ALARM);

```

```

if (alarmUri == null) {

    alarmUri = RingtoneManager.getDefaultUri(RingtoneManager.TYPE_NOTIFICATION);
}

Ringtone ringtone = RingtoneManager.getRingtone(context, alarmUri);
ringtone.play();

//this will send a notification message
ComponentName comp = new ComponentName(context.getPackageName(),
    AlarmService.class.getName());
startWakefulService(context, (intent.setComponent(comp)));
setresultCode(Activity.RESULT_OK);
}

}

```

content_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="com.sha.sp_alarm.MainActivity"
    tools:showIn="@layout/activity_main">

    <TimePicker
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/alarmTimePicker"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />

    <ToggleButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Alarm On/Off"
        android:id="@+id/alarmToggle"
        android:layout_centerHorizontal="true"
        android:layout_below="@+id/alarmTimePicker"
        android:onClick="onToggleClicked" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="?android:attr/textAppearanceLarge"
        android:text=""
        android:id="@+id/alarmText"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:layout_below="@+id/alarmToggle" />
</RelativeLayout>

```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.sha.sp_alarm">

    <uses-permission android:name="android.permission.WAKE_LOCK" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme">
        <activity
            android:name=".MainActivity"
            android:label="@string/app_name">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <service
            android:name=".AlarmService"
            android:enabled="true" />
            <receiver android:name=".AlarmReceiver" />
    </application>
</manifest>
```

