

METHODS OF TESTING

- **INTERFACE TESTING** - TESTS GENERATED BY USING THE INTERFACE.
 - **INTEGRATION TESTING** - TESTING THE COLLECTION OF COMPONENT FUNCTIONS
 - **ACCEPTANCE TESTING** - CUSTOMERS PERFORM TESTING PRIOR TO PURCHASE.
 - **UNIT TESTING** - TESTING INDIVIDUAL COMPONENTS OF THE PROGRAM
 - **ROBUST TESTING** - TESTING UNINTENDED INPUTS
 - **PERFORMANCE TESTING** - TESTING PERFORMANCE REQUIREMENTS (EX: 1000 TRANSACTIONS/MIN)
 - **LOAD TESTING** - TESTING HOW LONG IT TAKES TO PERFORM OPERATIONS UNDER LOAD
 - **STRESS TESTING** - SIMILAR TO LOAD TESTING BUT TO CHECK THE BEHAVIOR
 - **REGRESSION TESTING** - TESTING ALL THE CHANGES THAT MIGHT OCCUR BY MODIFYING A SEGMENT OF CODE
 - **RELIABILITY TESTING** - TESTING THE RELIABILITY OF CODE
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PROGRAM VERIFICATION

PROS: • ELIMINATES ERRORS

CONS: • VERIFICATION PROCESS MIGHT BE INCORRECT

- TIME CONSUMING

- MOST OF THE TIMES IS NOT SUFFICIENT

3 SOFTWARE TESTING METRICS

1) **ORGANIZATIONAL METRICS** - ALLOWS SENIOR MANAGEMENT TO MONITOR THE OVERALL STRENGTH OF THE ORGANIZATION, OR THE WEAKNESSES

2) **PROJECT METRICS** - THE RATIO OF ACTUAL-TO-PLAN SYSTEM TEST EFFORTS AND TOTAL # OF TESTS.

3) **PRODUCT METRICS** - USEFUL IN MAKING DECISIONS ABOUT THE PRODUCT (EG: SHOULD IT BE RELEASED)

4) 2 PROS OF TEST FIRST:

PROS: 1) PROBLEMS ARE FOUND EARLIER

2) EXPOSES REQUIREMENT PROBLEMS SOONER

5) How AND WHEN DOES EACH APPROACH DO TESTING?

- 1) **WATERFALL** - TESTING OCCURS AT THE END (SYSTEM & ACCEPTANCE TESTING)
- 2) **V-MODEL** - TESTING IS PARALLEL TO DEVELOPMENT
- 3) **SPIRAL** - TESTING IS DONE IN INCREMENTS.
EARLY STAGE, AFTER PROTOTYPE REFINEMENT AND THEN IN FINAL STAGES
- 4) **AGILE** - TESTING HAPPENS OFTEN IN SMALL CHUNKS.