Testing is getting more complex and sophisticated every year, with programs going larger and more complex, new testing techniques, new programming paradigms and test automation.

The four means of reducing bugs in your program are:

1. Reviewing

2. Testing

3. Formal specification and verification

4. Use of an appropriate development process

All companies spend a lot of time and manpower on testing with about 50% of a project time on testing.

Verification is the process of determining whether output of one phase of development conforms to its previous phase.

Validation is the process of determining where a full developed system conforms to its software Requirements Specification(SRS) Document.

Software is tested at four levels:

1. Unit testing

2. Integration testing

3. System testing

4. Regression testing