What is Software Quality?

Totality of features or characteristics of a product or service that bear on its ability to satisfy Stated and Implied needs

Why find Defects?

- Increase confidence in the reliable operation of the system and get more business
- Reduce the likelihood of loss or even life-threatening incidents
- Obtain repeat and referral business from satisfied customer
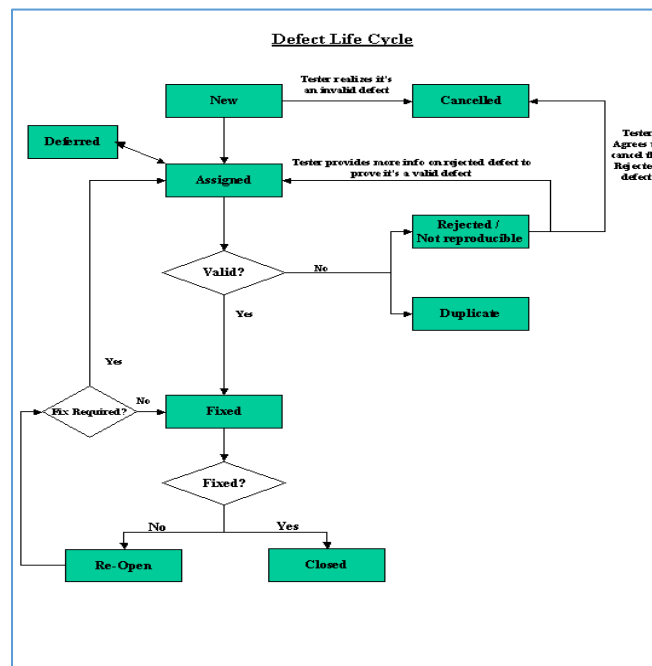- Decrease overall system costs associated with quality problems

What is defect?

A Software Defect / Bug is a condition in a software product which does not meet a software requirement (as stated in the requirement specifications) or end-user expectations (which may not be specified but are reasonable). In other words, a defect is an error in coding or logic that causes a program to malfunction or to produce incorrect/unexpected results.

Defect life cycle

Defect Life Cycle (Bug Life cycle) is the journey of a defect from its identification to its closure.

Below lifecycle diagram, covers all possible states.

Various phases of Defect/Bug life cycle is explained as follows:

- **New**: When a new defect is logged and posted for the first time. It is assigned a status NEW.
- **Assigned:** Once the bug is posted by the tester, the lead of the tester approves the bug and assigns the bug to developer team
- **Open:** The developer starts analyzing and works on the defect fix
- **Fixed:** When developer makes necessary code change and verifies the change, he or she can make bug status as "Fixed."
- **Reopen:** If the bug persists even after the developer has fixed the bug, the tester changes the status to "reopened". Once again the bug goes through the life cycle.
- **Closed:** If the bug is no longer exists then tester assigns the status "Closed."
- **Duplicate:** If the defect is repeated twice or the defect corresponds the same concept of the bug, the status is changed to "duplicate."
- **Rejected:** If the developer feels the defect is not a genuine defect then it changes the defect to "rejected."
- **Deferred:** If the present bug is not of a prime priority and if it is expected to get fixed in the next release, then status "Deferred" is assigned to such bugs
- **Not a bug:** If it does not affect the functionality of the application then the status assigned to a bug is "Not a bug".