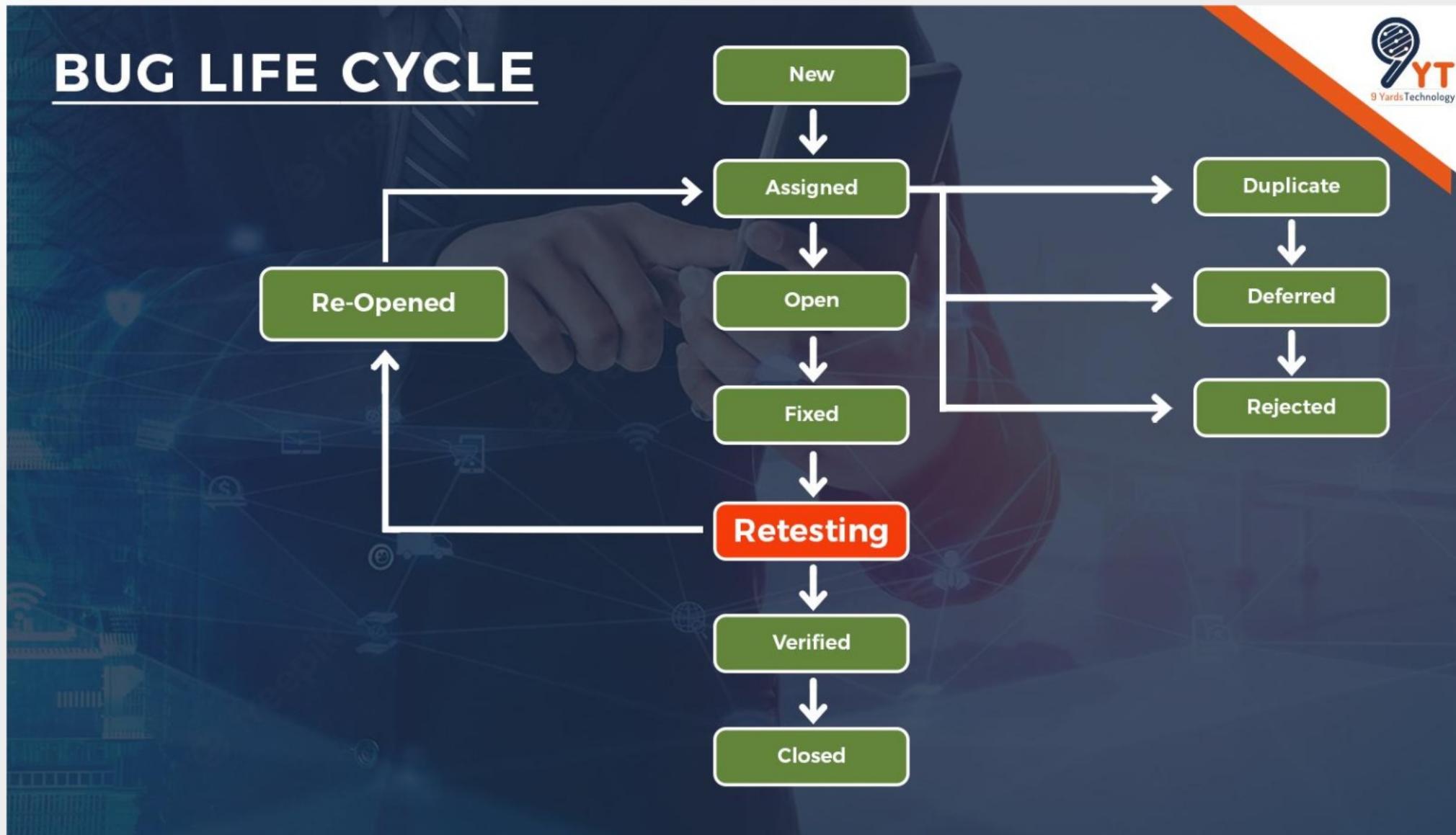


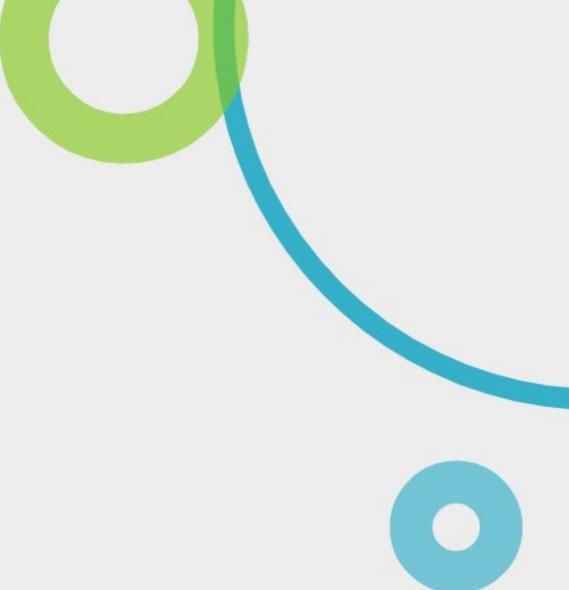
Defect Life Cycle



- A defect life cycle is a process in which the reported defect goes through multiple stages in its life cycle. It starts as soon as a defect is found and closes when the tester is assured that it is fixed and not impacting any other functionality or areas of the software.
- There are two major persons required in any Software Development process–
 1. **Software Developer** – One who designs and implements the code.
 2. **Software Tester** – One who tests the software, detects as many defects as possible in the system, and reports them.

Defect States

- When a defect is reported, it has to go through different states as mentioned below:
 1. **New:** It is the very first state of the Defect Life Cycle. It occurs when a new defect is found and reported. In this, the tester makes a proper document by mentioning how to reproduce the defect.
 2. **Assigned:** In this state, the bug is assigned to a particular developer who takes full responsibility for fixing the defect.
 3. **Open:** When the developer starts working on the defect, its state change from assigned to open. The developer will go through the details of the tester's information and will check if this is a valid defect or not. In this state, the defect can be moved to Duplicate, Deferred, or Rejected, based on analysis.
 4. **Fixed:** When a defect is valid, the developer starts working on it. Once the developer fixes it by implementing the code changes and validates it on his end, the defect moves to the fixed state.



5. Pending Retest: Once the developer fixes the defect, he provides the latest code to the tester to retest the defect. The tester re-validates the defect and changes the defect status according to the results. It is changed to the 'Pending Retest' state when it is pending from the tester's end.

6. Retest: It is the tester's responsibility to retest the defect. If it is fixed, the tester closes the defect with proper evidence. If it is not fixed, the tester changes it to the re-open state. Once the defect is fixed, it moves to pending retest.

7. Re-Opened: Once a bug comes for a retest, the tester retests it. If the defect is still not fixed after the developer's fix, the tester re-opens the defect and assigns it back to the developer for the fix. In this case, the defects must go through the whole life cycle again.

8. Deferred: The bug can be marked as deferred also. When a bug is marked as deferred, it means that it will be fixed in the next release. There might be many reasons to mark the defect as 'Deferred'. It can be a low priority or a defect not affecting the software or functionality.