# Software Quality Assurance

## TICT 3232

Lecture - 09

# Defect

- Think of a defect as a deviation from expected software behavior.

- In other words, if a website or app functions differently from what users expect, that particular variation would be considered a defect.

- In software testing circles, the term **defect** is often used interchangeably with **bug.** However, there is a technical difference.

- A bug is a defect that results from an error or some issue in code. This is not true for all defects.

# Defect Management

- Defect Management is a systematic process to identify and fix bugs.

- A defect management cycle contains the following stages :
  - Discovery of Defect
  - Defect Categorization
  - Fixing of Defect by developers
  - Verification by Testers
  - Defect Closure
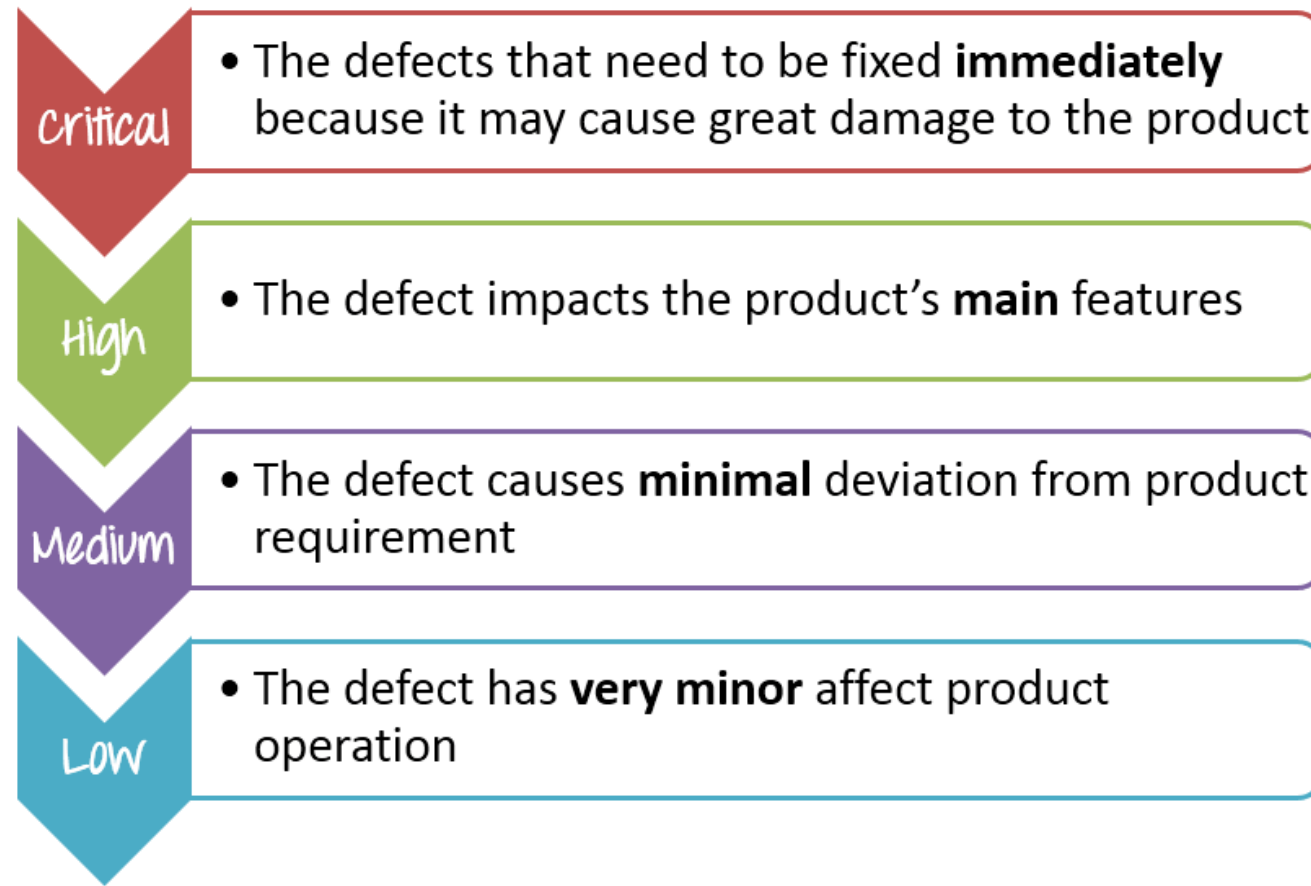  - Defect Reports at the end of project

# Defect Discovery

- In the discovery phase, the project teams have to discover as many defects as possible, before the end customer can discover it.
- A defect is said to be discovered and change to status accepted when it is acknowledged and accepted by the developers.
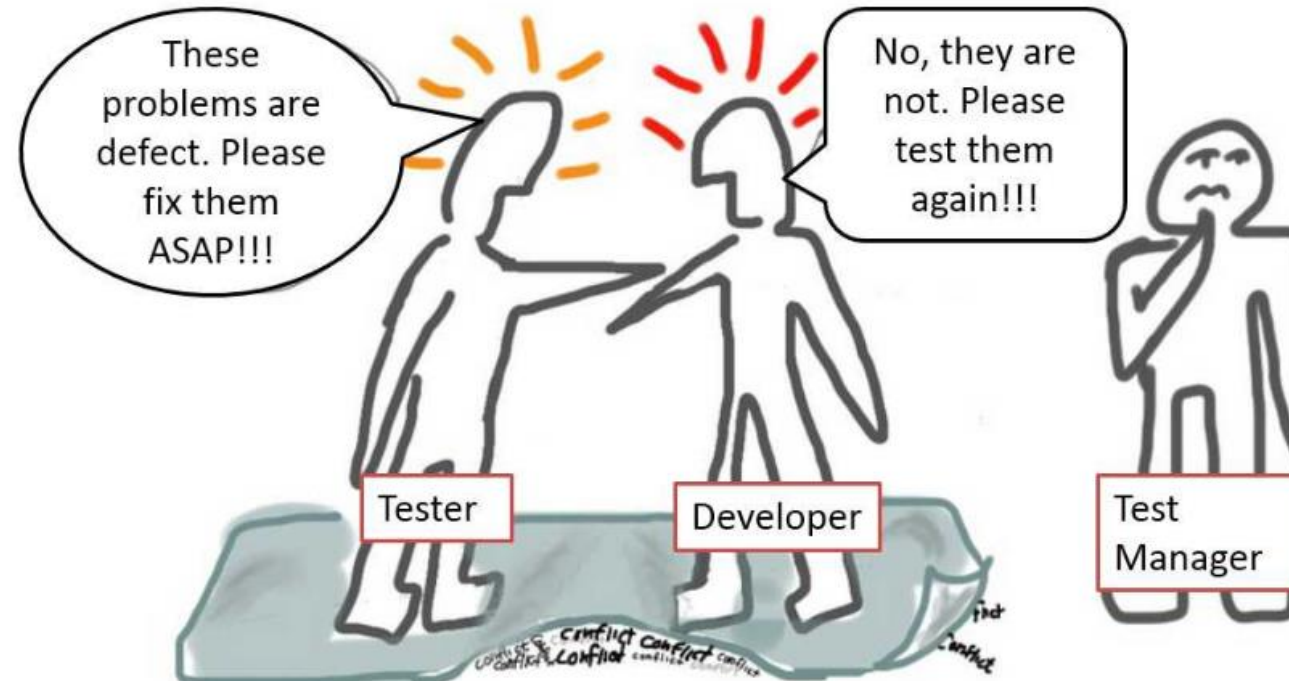
- In such case, as a Test Manager, what will you do?
  - Agree With the test team that its a defect
  - Test Manager takes the role of judge to decide whether the problem is defect or not
  - Agree with the development team that is not a defect

# Defect Categorization

- Defect categorization help the software developers to prioritize their tasks.

- That means that this kind of priority helps the developers in fixing those defects first that are highly crucial.

**Critical**
- The defects that need to be fixed **immediately** because it may cause great damage to the product

**High**
- The defect impacts the product's **main** features

**Medium**
- The defect causes **minimal** deviation from product requirement

**Low**
- The defect has **very minor** affect product operation

**Defects are usually categorized by the Test Manager.**

| No. | Description | Priority | Explanation |
| --- | --- | --- | --- |
| 1 | The website performance is too slow | High | The performance bug can cause huge inconvenience to user. |
| 2 | The login function of the website does not work properly | Critical | Login is one of the main function of the banking website if this feature does not work, it is serious bugs |
| 3 | The GUI of the website does not display correctly on mobile devices | Medium | The defect affects the user who use Smartphone to view the website. |
| 4 | The website could not remember the user login session | High | This is a serious issue since the user will be able to login but not be able to perform any further transactions |
| 5 | Some links doesn't work | Low | This is an easy fix for development guys and the user can still access the site without these links |

# Defect Resolution

- Defect Resolution in software testing is a step by step process of fixing the defects.

- Defect resolution process starts with assigning defects to developers, then developers schedule the defect to be fixed as per priority, then defects are fixed and finally developers send a report of resolution to the test manager.

- This process helps to fix and track defects easily.

- Assignment: Assigned to a developer or other technician to fix, and changed the status to Responding.

- Schedule fixing: The developer side take charge in this phase. They will create a schedule to fix these defects, depend on the defect priority.

- Fix the defect: While the development team is fixing the defects, the Test Manager tracks the process of fixing defect compare to the above schedule.

- Report the resolution: Get a report of the resolution from developers when defects are fixed.

# Verification

- After the development team fixed and reported the defect, the testing team verifies that the defects are actually resolved.

# Closure

- Once a defect has been resolved and verified, the defect is changed status as closed.

- If not, you have send a notice to the development to check the defect again.

# Defect Reporting

- Defect Reporting in software testing is a process in which test managers prepare and send the defect report to the management team for feedback on defect management process and defects' status.

- Then the management team checks the defect report and sends feedback or provides further support if needed.

- Defect reporting helps to better communicate, track and explain defects in detail.

- The management board has right to know the defect status.

- They must understand the defect management process to support you in this project.

- Therefore, you must report them the current defect situation to get feedback from them.

# Thank you