**Severity and Priority of a defect**

A defect is an error or a bug in an application while being created. A programmer while designing and building the software can make mistakes or error which in turn can create flaws in the software. These are called defects.

When actual result deviates from the expected result while testing a software application or product results into a defect. Hence, any deviation from the specification mentioned in the product functional specification document is a defect. In different organizations, it’s called differently like bug, issue, incidents or problem.

When the result of the software application or product does not meet with the end user expectations or the software requirements then it results into a Bug or Defect. These defects or bugs occur because of an error in logic or in coding which results into the [failure](http://istqbexamcertification.com/what-is-a-failure-in-software-testing/) or unpredicted or unanticipated results.

When there are many defects in an application they are written as a report called the Defect report.

This Defect report or Bug report consists of the following information:

* **Defect ID** – Every bug or defect has it’s unique identification number
* **Defect Description** – This includes the abstract of the issue.
* **Product Version** – This includes the product version of the application in which the defect is found.
* **Detail Steps** – This includes the detailed steps of the issue with the screenshots attached so that developers can recreate it.
* **Date Raised** – This includes the Date when the bug is reported
* **Reported By** – This includes the details of the tester who reported the bug like Name and ID
* **Status** – This field includes the Status of the defect like New, Assigned, Open, [Retest](http://istqbexamcertification.com/what-is-retesting/), [Verification](http://istqbexamcertification.com/what-is-verification-in-software-testing-or-what-is-software-verification/), Closed, Failed, Deferred, etc.
* **Fixed by** – This field includes the details of the developer who fixed it like Name and ID
* **Date Closed** – This includes the Date when the bug is closed
* **Severity** – Based on the severity (Critical, Major or Minor) it tells us about impact of the defect or bug in the software application.
* **Priority** – Based on the Priority set (High/Medium/Low) the order of fixing the defect can be made

**More about Severity and Priority**

1)  Severity:

It is the extent to which the [defect](http://istqbexamcertification.com/what-is-defect-or-bugs-or-faults-in-software-testing/) can affect the software. In other words it defines

the impact that a given defect has on the system. For example: If an application or web page crashes when a remote link is clicked, in this case clicking the remote link by an user is rare but the impact of application crashing is severe. So the severity is high but priority is low.

Severity can be of following types:

* ***Critical***: The defect that results in the termination of the complete system or one or more component of the system and causes extensive corruption of the data. The failed function is unusable and there is no acceptable alternative method to achieve the required results then the severity will be stated as critical.
* ***Major:*** The defect that results in the termination of the complete system or one or more component of the system and causes extensive corruption of the data. The failed function is unusable but there exists an acceptable alternative method to achieve the required results then the severity will be stated as major.
* ***Moderate***: The defect that does not result in the termination, but causes the system to produce incorrect, incomplete or inconsistent results then the severity will be stated as moderate.
* ***Minor***: The defect that does not result in the termination and does not damage the [usability](http://istqbexamcertification.com/what-is-usability-testing-in-software-and-its-benifits-to-end-user/) of the system and the desired results can be easily obtained by working around the defects then the severity is stated as minor.
* ***Cosmetic***: The defect that is related to the enhancement of the system where the changes are related to the look and field of the application then the severity is stated as cosmetic.

2)  Priority:

Priority defines the order in which we should resolve a defect. Should   we fix it now, or can it wait? This priority status is set by the tester to the developer mentioning the time frame to fix the defect. If high priority is mentioned then the developer has to fix it at the earliest. The priority status is set based on the customer requirements. For example: If the company name is misspelled in the home page of the website, then the priority is high and severity is low to fix it.

Priority can be of following types:

* ***Low:*** The defect is an irritant which should be repaired, but repair can be deferred until after more serious defect have been fixed.
* ***Medium***: The defect should be resolved in the normal course of development activities. It can wait until a new build or version is created.
* ***High***: The defect must be resolved as soon as possible because the defect is affecting the application or the product severely. The system cannot be used until the repair has been done.

Few examples of important scenarios related to the severity and priority :

* *High Priority & High Severity*: An error which occurs on the basic functionality of the application and will not allow the user to use the system. (Eg. A site maintaining the student details, on saving record if it, doesn’t allow to save the record then this is high priority and high severity bug.)
* *High Priority & Low Severity*: The spelling mistakes that happens on the cover page or heading or title of an application.
* *High Severity & Low Priority*: An error which occurs on the functionality of the application (for which there is no workaround) and will not allow the user to use the system but on click of link which is rarely used by the end user.
* *Low Priority and Low Severity*: Any cosmetic or spelling issues which is within a paragraph or in the report (Not on cover page, heading, title).

### **Difference between Defect Priority and Defect Severity**

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| **Defect** **Priority** | **Defect** **Severity** |
| * Priority defines the order in which the developer should resolve a defect | * It is defined as the degree of impact that a defect has on the operation of the product |
| * Priority is categorized into three types   + Low   + Medium   + High | * Severity are categorized into five types   + Critical   + Major   + Moderate   + Minor   + Cosmetic |
| * Priority is associated with scheduling | * Severity is associated with functionality or standards |
| * Priority indicates how soon the bug should be fixed | * Severity indicates the seriousness of the defect on the product functionality |
| * Priority of defects is decided in consultation with the manager/client | * QA engineer determines the severity level of the defect |
| * Priority is driven by business value | * Severity is driven by functionality |
| * Its value is subjective and can change over a period of time depending on the change in the project situation | * Its value is objective and less likely to change |
| * High priority and low severity status indicates; defect have to be fixed on immediate bases but does not affect the application | * High severity and low priority status indicates defect have to be fixed but not on immediate bases |
| * Priority status is based on the customer requirements | * Severity status is based on the technical aspect of the product |
| * During UAT the development team fix defects based on priority | * During SIT, the development team will fix defects based on the severity and then priority |

### Guidelines that every tester should consider before selecting severity

Severity parameter is assessed by the tester whereas the priority parameter is assessed by the product manager or by the triage team. For prioritizing the defect, it is imperative for a tester to choose the right severity to avoid confusion with the development team.

* Understand the concept of priority and severity well
* Always assign the severity level based on the issue type as this will affect its priority
* Understand how a particular scenario or test case would affect the end-user
* Need to consider how much time it would take to fix the defect based on its complexity and time to verify defect

### Conclusion:

* Assigning wrong severity to defect can delay the STLC process and can have some drastic implication on the overall performance of the team. So, the responsible person needs to be precise and accurate on its call for assigning defect.