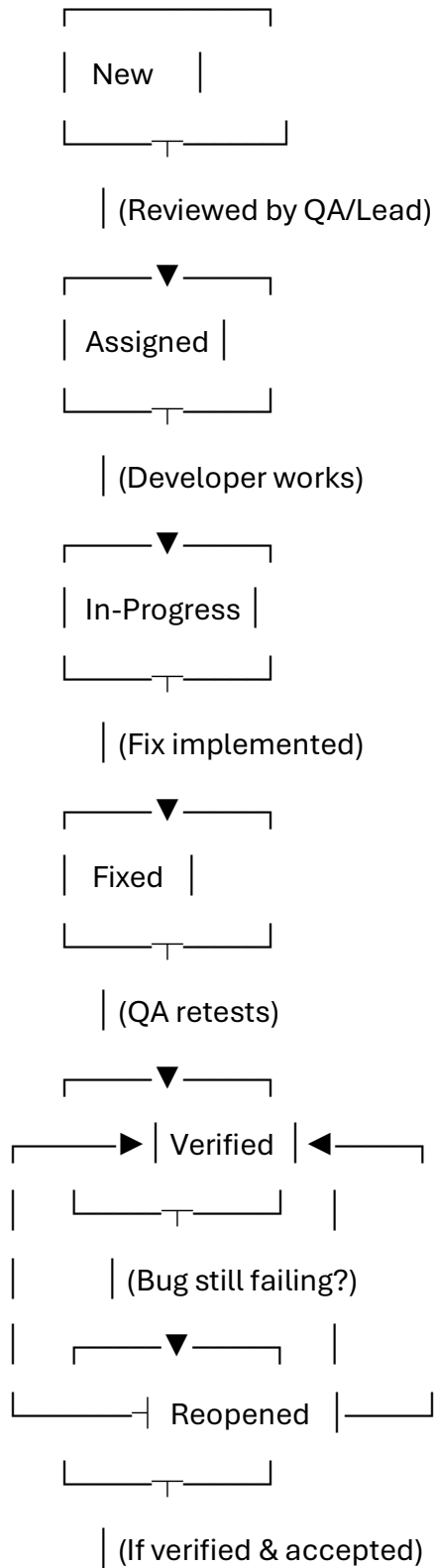


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## Brief Description of Each Stage

### 1. New

When a tester discovers a defect, they submit a *bug report*. The bug receives the status **New**, meaning it has been logged but not yet reviewed. At this stage, the QA lead or project manager checks if the bug is valid, reproducible, and not a duplicate.

### 2. Assigned

After review, the issue is **assigned** to a developer or a development team. The developer acknowledges responsibility and begins initial analysis to understand the root cause.

### 3. In-Progress

The developer is actively working on the bug. This includes reproducing the issue, examining logs, debugging, modifying code, and preparing a patch. The bug remains in this state until a fix is implemented.

### 4. Fixed

Once the developer completes the code changes and ensures the issue no longer appears in their environment, the bug status changes to **Fixed**. The fix is now ready for QA to validate.

## 5. Verified

QA retests the application using the steps to reproduce provided in the bug report.

If the issue is indeed resolved, the bug becomes **Verified**. This confirms that the fix works in the testing environment.

## 6. Reopened

If QA finds that the defect still exists—or the fix caused another issue—the bug is **Reopened**. It cycles back to the development team for additional work. This may happen multiple times depending on the complexity of the defect.

## 7. Closed

When the fix is confirmed and accepted by QA and stakeholders, the bug status becomes **Closed**. This indicates the defect is resolved and requires no further action.

## References

1. Bugzilla Documentation – *Bug Status and Workflow*. Bugzilla.org.
2. IEEE Standard 1044-2009 – *Standard Classification for Software Anomalies*.
3. Sommerville, Ian. *Software Engineering*, 10th Edition, Pearson, 2015 (Chapter on Software Quality).
4. Pressman, Roger. *Software Engineering: A Practitioner's Approach*, 8th Edition, McGraw-Hill.