# Defect Life Cycle

## 🔹 Definition

**# Source**: **Chatgpt (GPT-5-Standard) at [8/18/2025]**

The **Defect Life Cycle** (also called **Bug Life Cycle**) is the **process a defect goes through from its discovery until its closure**.

It describes the **states** (statuses) a defect can have and the **transitions** between them.

## **⚙️ Phases / States in Defect Life Cycle**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/18/2025]**

Here’s a typical flow (some organizations may have slight variations):

1. **New / Open**
   * Tester finds a defect and logs it in the defect tracking system.
2. **Assigned**
   * The defect is assigned to a developer by the QA Lead / Project Manager.
3. **In Progress / Fixed**
   * Developer works on the defect and applies a fix.
4. **Ready for Retest / Resolved**
   * Developer marks defect as “fixed” and passes it back to QA for retesting.
5. **Retesting**
   * Tester checks if the fix works by re-running the test.
6. **Closed**
   * If the fix is successful, tester marks defect as “Closed”.
7. **Reopened**
   * If the issue is **not fixed**, tester reopens it and sends it back to the developer.
8. **Deferred / Postponed**
   * If the defect is valid but will be fixed in a **future release** (usually low priority/impact).
9. **Rejected / Not a Bug**
   * If the defect is **invalid** (e.g., due to misunderstanding or expected behavior).
10. **Duplicate**
    * If the defect is the same as another one already reported.

## **🔁 Simplified Life Cycle Flow**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/18/2025]**

**New → Assigned → In Progress → Fixed → Retest → Closed** ↘ Reopened (if issue persists)  
 ↘ Deferred / Rejected / Duplicate (alternative paths)

## **🎯 Objectives of Defect Life Cycle**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/18/2025]**

* Ensure every defect is tracked from discovery to closure.
* Provide visibility of defect status to **stakeholders**.
* Help in prioritizing and planning defect fixes.
* Support quality improvement by analyzing **defect trends**.

## **📊 Example**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/18/2025]**

* **Defect ID**: BUG-120
* **State 1**: New (tester found login error)
* **State 2**: Assigned (to developer)
* **State 3**: Fixed (developer updated login code)
* **State 4**: Retested (tester validated fix)
* **State 5**: Closed (bug resolved successfully)

✅ **In short:** The **Defect Life Cycle** is the journey of a defect from **New → Fix → Verification → Closure**, with side paths like **Rejected, Deferred, Duplicate, or Reopened**.