# Maintenance Testing

## What is Maintenance Testing

**# Source**: **Chatgpt (GPT-5-Standard) at [8/14/2025]**

**Maintenance Testing** is the testing carried out **after a software system has been deployed** and is in operation, to ensure that any changes made during its life cycle do not negatively impact existing functionality.

In simple terms:

It’s the *“after go-live”* testing done when the system is updated, fixed, or enhanced.

## **Why We Need Maintenance Testing**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/14/2025]**

Software rarely stays the same —

* **bugs get fixed**,
* **features are added**,
* **environments change**.

Each change risks introducing new defects or breaking something that already worked. Maintenance testing ensures the system continues to meet requirements after these changes.

## **When Maintenance Testing Happens**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/14/2025]**

* **Bug fixes** — verifying that the reported defect is fixed (re-testing).
* **Enhancements** — checking that new features work without breaking old ones.
* **Environment updates** — OS upgrades, browser updates, database version changes.
* **Regulatory changes** — adapting the software to meet new compliance rules.
* **Performance tuning** — ensuring optimizations don’t cause new problems.

## **Types of Maintenance Testing**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/14/2025]**

1. **Regression Testing**
   * Re-run existing tests to ensure old functionality still works after changes.
2. **Confirmation Testing (Re-testing)**
   * Test again to confirm that a specific defect has been fixed.
3. **Impact Analysis Testing**
   * Identify and test areas that could be affected by the change, even if they weren’t directly modified.

## **Example Scenario**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/14/2025]**

* A **banking app** updates its password policy to allow special characters.
* Maintenance testing steps:  
  1. Test the new rule for special characters.
  2. Ensure old rules (minimum length, uppercase requirement) still work.
  3. Check that login, registration, and password reset still function.
  4. Run security tests to make sure the new feature doesn’t introduce vulnerabilities.

## **Key Points**

**# Source**: **Chatgpt (GPT-5-Standard) at [8/14/2025]**

* Done **after deployment**, not during initial development.
* Protects stability during **software evolution**.
* Combines **re-testing** + **regression testing**.
* Often automated in Continuous Delivery pipelines for faster verification.