# Levels and types of testing

Assignment

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- **1.** Make a **comparative table** of **functional, non-functional, and change-related types of testing**. The comparison should contain the following blocks:
  *what is being checked; when applicable; restrictions; peculiarities.*
- **2.** Explain the **difference between regression and retesting** (5 sentences).

**1.**

| ? | Functional | Non-functional | Change-related |
|---|---|---|---|
| ***What is being checked*** | **What the system should do with its components:** functions, behavior, GUI, correctness and completeness | **How well is the system doing with its functionalities** through: performance, security, usability, reliability and compatibility | **Changes being made:** their impact, potential defects; confirmation of fixed defects |
| ***When applicable*** | **In SDLC**, can be applicable at **Development** (unit/component) and **Testing** phases; **In STLC**, can be applicable at **Test Execution** phase within each **Test Level** | Related to each functional test, to measure | For each change that occurs in functionality or after applying defect fixes |

| ? | Functional | Non-functional | Change-related |
|---|---|---|---|
| ***Restrictions*** | **Time**: Awaiting the modules to be developed and/or integrated in order to be tested for functionality | **Dependable:** since we have to measure 'how' functionality will perform, after it is tested | **Constricted:** only if changes happen or defects occur |
| ***Peculiarities*** | If defects are not detected here, they could escalate to non-functional levels or need changing and fixes | Finding possible impediments although functionality is valid | Time consuming, repetitive, stunting development's progress |

## 2. The difference between regression and retesting

Retesting occurs on a specific test, it repeats the same test for a certain result to check and confirm if the defect has been fixed.

Regression test, occurs at a broader level of testing, for an unspecified number of defects that may occur at different levels from the whole system when it is tested.

Retesting may be needed when a change is made for a particular functionality, so the specific test could be run again in isolation and check if the reported defect has been fixed.

Regression tests may be needed when changes whether they're small or big ones occur within the system, so this test would check for the defects at a whole-picture level of the system even after Retesting is done, if it's needed.

Retesting targets reported defects and verifies if they are fixed, while Regression testing checks for possible new defects..