# **LEVEL 1**

**Make a comparative table of functional, non-functional and change-related types of testing.**

|  | Functional | Non-functional | Change-related |
| --- | --- | --- | --- |
| **What is checked** | Evaluate functions that the system should perform. | Evaluates characteristics of systems and software such as usability or performance efficiency. “How well” the system behaves. | Changes, that corrected the defect or implemented the functionality done correctly, and have not caused any unexpected consequences |
| **When applied** | When checking functions and features, as well as interaction with other systems, presented at the component or module integration system and reception level | If necessary, determine the characteristics of the software, which can be measured by various values, namely to check the system response from the side of performance, volume, scalability, usability, load, stress and etc | When changes are made to a system, either to correct a defect or because of new or changing functionality |
| **Limitation** | Functional testing can miss critical as well as logical errors in the system.  This testing cannot guarantee the readiness of the software to go live. | May affect the various high-level software subsystem.  Can increase the cost as tests require special consideration during the software architecture/high-level design phase. | With every change in the software, it needs to ensure the existing functionality is not affected in any sense.  It might be difficult for someone new in the team to understand what is being changed |
| **Features** | Essential for evaluating the performance and the functionality of a software application before it is delivered to the end user  It is performed from the perspective of the users, which allows the development team to create test scenarios that represent the real-world use scenarios.  Allows the team to meet the requirements of the user as well as the client.  Enhances the quality of the software product. | They specify the quality attribute of the software.  Ensure good user experience, ease of operating the software, and minimize the cost factor.  It focusses on customer’s expectation | Issues that already detected are fixed now  Lets the company know which defect is causing issues in the product and create software changes to prevent from sneaking them into develomplent cycle |

**Explain the difference between regression and retesting**

Regression testing is an evaluation aimed at verifying the fact that errors caused by changes in the application or among its functioning have not appeared in the previously working functionality.

Re-testing is an execution of test cases that previously found defects in order to confirm the elimination of defects.

# **LEVEL 2**

**Do you think it is possible for a product to conduct only functional testing, without checking non-functional requirements?**

In theory testing only functional side is possible. Product nature would be implemented and even will work for some time. But in a long way, without non-functional testing, we cannot guaranteed, that quality of product will be as customer expect to be.

Because after functional testing, we have a working carcas. But we can`t define, how well this created structure can hold a “quality plank” without non-functional testing.

Because, if your product can calculate “2+2=4”, that does not mean, that it would perform it well(fast, reliable, with scalabyility for others operations, how long could it do and etc.)

But from the side of super small features, that would not espect massive data proccesing, procced with only functional testing is possible.

**How do you understand the need for smoke testing? Is it always appropriate?**

Smoke testing is aimed at testing the most important and key functionality, the inperability of which makes the idea of ​​using an application (or other object subjected to smoke testing) meaningless.

Smoke testing is done after a new build(that not yet stable) is released to determine the overall quality level of the application and to decide whether it is appropriate to perform critical path testing and extended testing

After gathering of information, I couldn`t find any reasons for unappropriate case of using it, due to it is goal, to check if minimal functions of tested object are works , to perform furhter testing

# **LEVEL 3**

[Functional testing](https://docs.google.com/spreadsheets/d/1gxWPt6sgtOu0-LRYueIQLn28rSOE7NsJ9oE-1LMKOIg/edit?usp=sharing)

* Performance
* Responsivenes
* Use-ability
* Security
* *Screen Adaption*
* *Network Coverage*

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