GO IT

Testing basics

Agenda

ÿ Quality Assurance, Quality Control ÿ Testing and its goals ÿ Bug, defect, failure

ÿ Validation and verification

Who is a software tester?

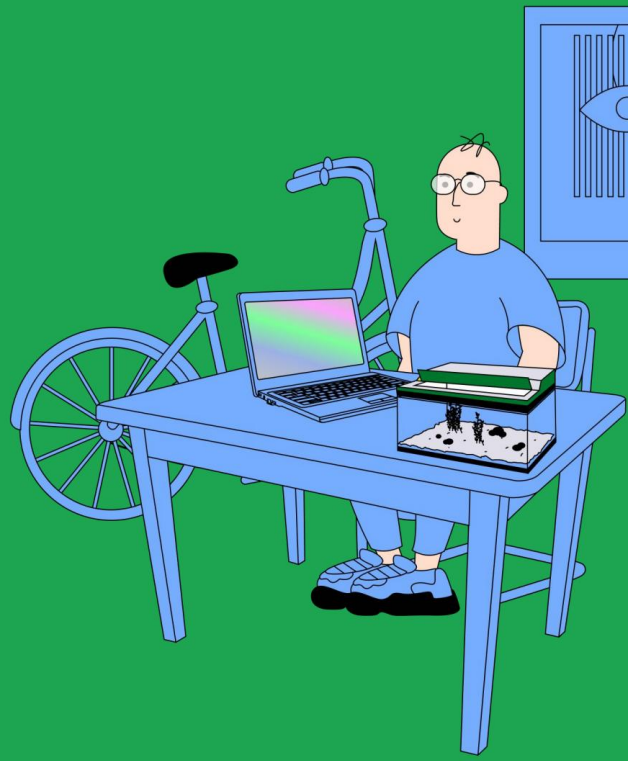
A tester is a person whose task is to check whether the software produced by programmers does what it is supposed to do, works without errors and meets the assumptions of the project (i.e. the expectations of the person who ordered the program or its end users). His work also allows to improve the usability of the program and affects its functionality.

In practice, the work of a manual tester comes down to:

- checking the correct operation of the application by methodically checking all functionalities,
- creating test scenarios, i.e. a set of tasks or steps that are necessary to check whether a given the function is working properly,
- describing errors in the operation of the application,
- analyzing whether the way in which the application works meets the expectations of the program ordering party, or the user who will use it,
- controlling the compliance of the program with the documentation.

Tester tasks

- Software testing
- Communication with the client and the team
- Analysis of product requirements
- Risk assessment
- Development of test documentation
- Creating reports and metrics
- Building processes in the team and organization



Quality Assurance, Quality Control

Quality Assurance, also known as QA, **focuses on preventing defects.** The purpose of these methods is to ensure that the approaches, techniques, methods and processes are designed and implemented in the right way for the audited projects. Quality assurance activities monitor and verify that the rules established in software development have been followed and are operational. It is worth noting that Quality Assurance is a proactive and preventive process, as it tries to detect possible problems as early as possible.

Quality Control , also known as QC, **focuses on identifying defects.** The purpose of these methods is to ensure that the approaches, techniques, methods and processes are properly followed for audited projects. QC activities monitor and verify that the subsequent stages of the project meet certain quality standards.
It is worth noting that Quality Control **is a reactive process** and its purpose is to identify defects. Quality Control comes after Quality Assurance.

Quality Assurance	Quality Control
Defect prevention	Identification and repair of defects
Quality management tool	Quality verification tool
The whole team is responsible for QA	The testing team is responsible for QC
Thanks to QA, we make sure that we take the right actions	Thanks to QC, we make sure that we get the expected results
QA defines standards and methodologies	QA ensures compliance with standards and activities along with the designated methodologies
The statistical technique used in QA is known as Statistical Process Control.	The statistical technique used in QC is known as Statistical Quality Control.

bug

A bug is the result of an error or defect in a program's code that causes unintended behavior. It shows an error in program that results from a mistake made by developer* in the source code of the program or its project. Usually there are bugs in every program, however, well-written software includes in their relatively little.