Smoke, Sanity, and Regression Testing

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Smoke Testing Intro

Smoke testing is an approach that is usually carried out during the initial development stages of the software development lifecycle. Its purpose is to make sure that the core functionalities of the program are working fine without any issues

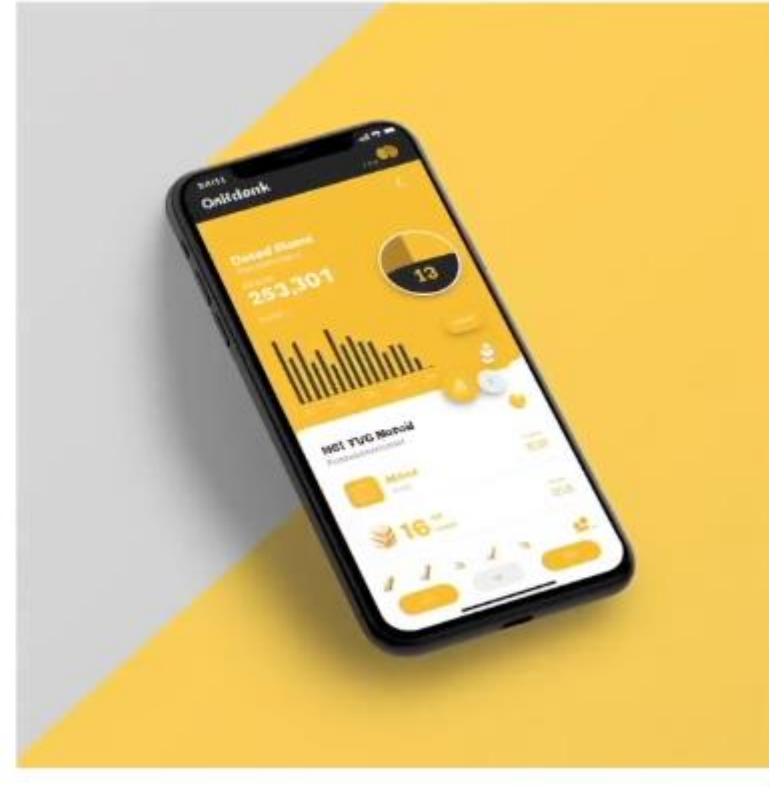Executed before any detailed functional tests

Verify that the core or main functionalities works fine

Testing team does not waste time on broken builds

Example Smoke Testing Scenario

We are testing a banking application with important functions

We'll be logging into the banking app and making a money transfer. If the money is not sent to the other user, we will stop testing.

Smoke Testing...cont

When to perform smoke testing:

- Developers provide a fresh build to the Quality Assurance team

- New module is added to the existing functionality

- Smoke testing is considered **shallow and wide** testing.

- More concerned to instable builds.

- takes all important features and performs high-level testing,
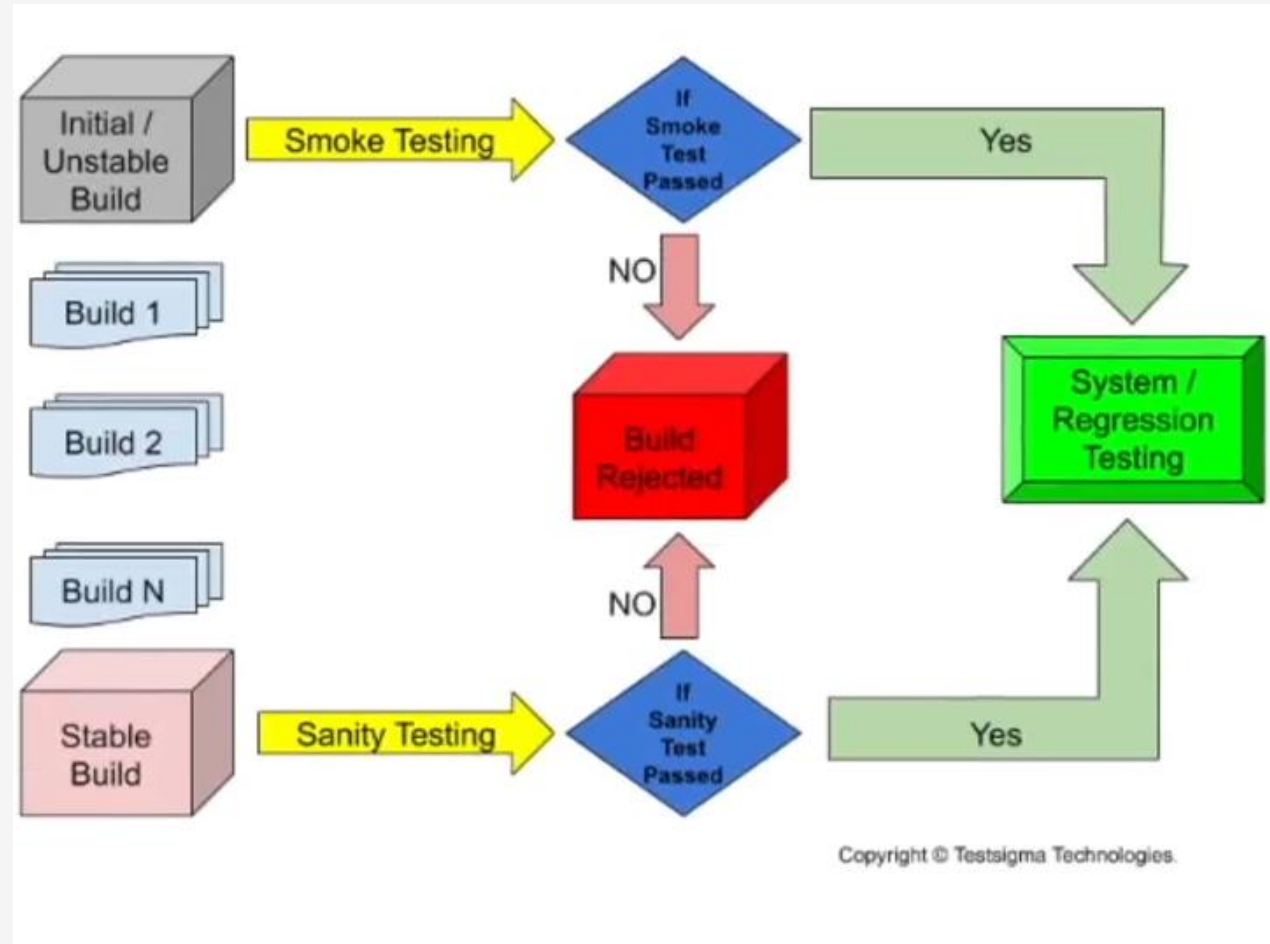
Sanity Testing

Sanity testing is performed to check whether the software product is working correctly

It does a **quick evaluation** of the **quality** of the software release to determine whether it is **eligible** for further rounds of **testing** or not

- Performed after receiving stable builds

- Sanity testing is considered **narrow and deep** testing

- takes some very significant features and performs deep testing.

Smoke and Sanity Together

Regression Testing

Once **sanity testing** of the changed functional is completed, all the impacted features of the application require complete testing. This is called **regression testing**

| New features being introduced | Defects being fixed | Performance fixes | change in requirement |

Which areas should be included in regression testing?

Some ideas for areas to test during regression testing:

- Areas exposed to a high number of users

- Areas that have frequent defects

- Core features

- High complex functionality

- Areas that have undergone recent changes

- Critical integrations

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Smoke, Sanity, and Regression Testing

Smoke Testing	Sanity Testing	Regression Testing
Performed on initial builds	Performed on stable builds	Performed on stable builds
To test the stability of new build	To test the stability of new functionality or code changes in the existing build	To test the functionality of all affected areas after new functionality/code changes in the existing build
Covers end to end basic functionalities	Covers certain modules, in which code changes have been made	Covers detailed testing targeting all the affected areas after new functionalities are added
Executed by testers & sometimes also by developers	Executed by testers	Executed by testers, sometimes via automation
A part of basic testing	A part of regression testing	Regression Testing is a super set of Smoke and Sanity Testing

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