

Exercise4 - Performance and Non-functional Testing

1. Identify the appropriate types of Performance Testing for an e-commerce site like eMAG. Justify your answer.

- **Load Testing:**
 - Checks the performance limits of the site when there is a large number of users, e.g., during promotions or discounts on certain products.
- **Stress Testing:**
 - Tests the site under extreme conditions, with very high traffic beyond expected limits, e.g., during Black Friday.
- **Performance Testing:**
 - Checks the loading/response time of the pages, even when many users are accessing the site. The site should maintain consistent performance.

2. Identify the appropriate types of Performance Testing for a video streaming platform like YouTube. Justify your answer.

- **Load Testing:**
 - Ensures that videos play without interruptions and with good quality, even with many concurrent users.
- **Stress Testing:**
 - Tests the platform's limits during high-traffic scenarios, such as new video releases or live broadcasts.
- **Spike/Peak Load Testing:**
 - Checks how the system handles sudden spikes in traffic, e.g., when a video goes viral.

- **Soak/Endurance Testing:**
 - Ensures the platform performs reliably over extended periods (24/7 usage) without degradation in quality.

3. Identify the appropriate types of Non-functional Testing for a banking application. Justify your answer.

- Performance Testing:
 - Ensures many transactions are processed quickly without delays.
- Usability Testing:
 - Ensures the app is easy and intuitive to use.
- Security Testing:
 - Ensures customer data and transactions are protected.
- Reliability Testing:
 - Ensures the app is available 24/7 and transactions complete without errors.
- Cross-browser Testing:
 - Ensures the app works on different browsers.

4. Test Cases for Smoke Testing Suite - Slack Platform

- Login test
- Logout test
- Sending a message test
- Receiving a message test
- Create Slack channel test
- Notification test
- Sending files/photos/links test

5. Explain the difference between Smoke Testing and Regression Testing.

Difference between Smoke Testing and Regression Testing	
<i>Smoke testing</i>	<i>Refression testing</i>
In-depth testing	In-depth testing
Verifies the stability of features	Verifies functional consistency
responsabile pentru acceptarea/respingerea versiunilor de software	Not responsible for accepting/rejecting builds
Responsible for accepting/rejecting software builds	verifica daca noile modificari aduse aplicatiei nu au introdus noi bug-uri
Tests only critical functionalities	Covers all functionalities
Usually involves new test cases	Reuses existing test cases
Fast execution	Time-consuming

6. On which environment are Regression Testing and Smoke Testing executed? Justify your answer.

Regression Testing can be executed in:

- Development Environment: to check if new changes introduce bugs
- Testing Environment: to ensure the app functions correctly after changes
- Staging Environment: simulates production environment before release
- Production Environment: rarely, to validate new updates

Smoke Testing can be executed in:

- Development Environment: right after new code is written
- Testing Environment: to verify stability and requirements
- Staging Environment: to confirm the app functions before going live
- Production Environment: rarely, to check core functionality after deployment