BAPERS Non-functional testing

**Security:**

Application security testing is a process that verifies that the information system protects the data and maintains its intended functionality. It is one of the most important tasks as cyber attacks are on the rise.

Security testing of BAPERS system would consist of 5 techniques.

1. Access to the application.

Creation of multiple accounts with different roles is performed, then verified that each role has access to its own modules, forms and menus only.

1. Data Protection

Data storage in the database is checked to ensure that all sensitive data is properly encrypted as well as decrypted at the correct destination. Also, data transmission between the terminal and the server must be secure.

1. Brute-Force Attack

A software tool is deployed to brute force the application by guessing the password for the associated ID multiple times. After consecutive failed attempts the software should temporarily block access to the system.

1. Session management

Checks are performed to test maximum idling time if a single user can have multiple sessions, session termination after log out.

1. SQL injection

Ensure that maximum lengths of all input fields are defined and implemented. Also, verify that input fields can’t contain any script or tag input.

**Reliability:**

Reliability testing is a type of testing to verify that software is capable of performing without failures for a specified period of time, which is crucial for any system.

Reliability testing of BAPERS system would consist of 3 techniques.

1. Feature testing.

Feature testing involves checking each feature of the system.

* Each operation in the software is executed at least once.
* Each operation has to be checked for its proper execution.

1. Load testing.

Checking the performance of the system under the maximum work load.

1. Regression testing.

Checking if any new bugs have been introduced because of the fixing of previous bugs. This kind of testing is conducted every change of software version introducing new functionalities.