**Assignment questions:**

1. **What is non-functional testing? give some examples of non-functional tests that are not mentioned in the lecture’s slides.**

Non-functional testing is the testing of non-functional parts of a product such as performance, usability, or reliability.

Examples: Compatibility Testing or Stress Testing

1. **Is usability testing suitable for automation? give your insights.**

Also, some usability testing scenarios are possible to be automated, mostly it’s not the most suitable case for automation testing. Usability testing is mostly based on user experience which is difficult to animate using code.

1. **Make a comparison between white box, black box, and gray box testing. Mention some testing techniques that go under each method, the suitable test cases for each method, and the skills a tester should have to conduct each test.**

Black box testing is more conventional and refers to testing without access to the source code. In black box testing, approach testers provide inputs and validate outputs also the tester can check the documentation. To conduct black box testing it’s not necessary that a tester have any programming skills. examples of black box testing can be useability and accessibility testing.

White box testing refers to testing while having full access to the source code. In this approach, the tester can test lines of code, alters variables, uses if-else loops, and does other things. To conduct white box testing it’s necessary that the tester has good programming skills, especially in the tested system language. examples of white box testing can be unite testing or integration testing.

Gray box testing refers to testing while having partial access to the source code. To conduct gray box testing a tester should have some understanding of programming. One example of gray box testing can be integration testing.

1. **What is the difference between debugging testing and mutation testing techniques?**

Debugging testing is to seed faults in the source code then test the software and count how many seeded faults were found and thus extrapolate how many bugs are still left.

Mutation testing has to do with modifying the program in small ways. It focuses on helping testers develop effective tests or locate weaknesses in test data used by programs.

so, the main difference between the two techniques is: bebugging is used in order to extrapolate how many bugs are in the system while Mutation testing is used to estimate the effectiveness of testing.