1. Katalon

* Katalon is a test automation tool based on the automation frameworks of Selenium and Appium. Katalon offers dual scripting interfaces, allowing users with no coding skills to use a more straightforward interface. For those who can code, the platform runs on Groovy (a Java scripting language) and enables scripting with syntax, debugging and further provides code suggestions.

1. Selenium

* Selenium is often used for regression testing. It offers testers a playback tool that allows them to record and playback regression tests.

1. LambdaTest

* LambdaTest allows testers to record real-time browser compatibility testing. Plus, it enables screen recording and automated screenshot testing on several combinations at a time.

1. Ranorex

* Ranorex is a test automation tool for web, desktop, and mobile. This tool provides numerous benefits, such as codeless test creation, recording and replaying testing phases, and reusable test scripts.

1. Appium

* Appium is an open-source test automation framework. This framework supports multiple programming languages (Python, Java, PHP, JavaScript, etc.) for writing tests and can integrate CI/CD tools (e.g., Jenkins).

Black box Testing

1. Create test plans.

2. Test the external interfaces

3. Perform load testing

4. Perform stress testing

5. Perform security testing

6. Perform globalization testing

Gray box Testing

1. Identify and select Inputs from white and black box testing methods.

2. Identify probable outputs from these inputs.

3. Identify key paths for the testing phase.

4. Identify sub-functions for deep-level testing.

5. Identify inputs for sub-functions.

6. Identify probable outputs from sub-functions.

7. Execute sub-function test cases.

8. Assess and verify outcomes.

9. Repeat steps 4-8.

10.Repeat steps 7 and 8.

Gray box Testing

1. Identify the feature, component, program to be tested

2. Plot all possible paths in a flowgraph

3. Identify all possible paths from the flowgraph

4. Write Test Cases to cover every single path on the flowgraph

5. Execute, rinse, repeat

Part 2:

1. Somewhat knowledge of the internal workings are know
2. Also known as closed box testing, data driven testing and functional testing.
3. Normally done by testers and developers
4. Testing is done on the basis of high-level database diagrams and data flow diagram.
5. The most exhaustive and time-consuming type of testing
6. Not suited to algorithm
7. This can only be done by trial-and-error method