ASSIGNMENT NO 5

Title

Selection of tools and various testing cases for project perform.

Testing in DevOps

DevOps is a set of practices that highlights collaboration, communication, and automation throughout the application development lifecycle. Continuous Delivery allows teams to release a build after continuous testing automatically any time.The continuous repeatable release of software ensures speedy delivery of stable quality software to end user. Automation has an essential role to play in both DevOps and Continuous Delivery.

Automating DevOps and Continuous Delivery helps your organization provide continuous delivery to the users faster and manage a business with low risk.Testing needs to be fast and dynamic to match with the goals of DevOps and Continuous Delivery. With traditional testing approaches and tools, this is a seemingly difficult task. And, without the right testing approach, it will be difficult to meet the DevOps and Continuous Delivery standards.

Impact of DevOps on Testing

Testers are now expected to have at least the following knowledge and skills to be able to effectively carry out testing activities

- Basic networking knowledge
- Basic Unix/Shell scripting, e.g. bash, python
- Continous Integration/Continuous Delivery e.g. Jenkins,
- Performance testing tools such as JMeter or Gatling
- Ready for Operations and Resilience Testing
- Knowledge of containers, Docker, Kubernetes
- Querying monitoring tools such as Splunk
- Clouds services, e.g. AWS, Azure

Tool for Testing:

The right automation testing tool must be used after evaluating the capabilities of the tool closely. It should be capable of meeting end-to-end automation testing requirements. Thus make the test automation program really effective in the agile environment. The right automation testing tool must be used after evaluating the

capabilities of the tool closely. It should be capable of meeting end-to-end automation testing requirements. Thus make the test automation program really effective in the agile environment.Automated testing tools that can help ship code and deliver quality software on time.

Selenium is one of the open source tool used in testing.

1)Selenium

One of the main reasons for its widespread use is that it is open source. There are a number of frameworks implemented in different languages using Selenium, which offer more capabilities in automation testing.

Test Cases

1) Signup

Test cases	Registration Screen Signup
Objective	Click on sign up button then check all required/ mandatory fields with leaving all fields blank
Expected Result	All required/ mandatory fields should display with symbol * Instruction line * field(s) are mandatory should be displayed

2)Test Environment

Test cases	Test Environment Creation
Objective	Selection of Examination questions
Expected Result	Test questions selected successfully and get respective test id

3)Login

Test cases	Candidate login to give test
Objective	Pods should deploy and user should get terminal
Expected Result	Pods deployed successfully and user got terminal

4)Test Submission

Test cases	Test submission
Objective	Check respective command can execute in terminal
Expected Result	Move to the next question or test completed successfully

5)Test Evaluation

Test cases	Test Evaluation
Objective	Evaluation script should run in pod and return some value
Expected Result	Candidate get marks for respective question

6)Test Result

Test cases	Result declaration
Objective	Marks of the candidate should store in database in descending order
Expected Result	Candidate and organization both can see the result and candidate with higher marks must be in top of the list

Benefits

Test automation tools make regression testing possible and practical. If your release process allows for late delivery of new code and fixes right up to go-live, it is essential to regression test those code deliveries. By investing in extensive automated test code coverage for your application, you can test the entire battery against each delivery. This increases confidence in the release and reduces overall risk.