**A.Write a blog on below questions.**

**1.What is the difference between automated and manual testing in software development?**

Automated vs. Manual Testing

Automated Testing: Automated testing involves using software tools and scripts to perform test cases and compare the actual outcomes with expected results. It is especially useful for repetitive tasks, regression testing, and load testing. Some key advantages of automated testing include:

* Faster execution: Automation can quickly execute a large number of test cases.
* Reusability: Test scripts can be reused across different projects.
* Consistency: Automated tests provide consistent results.

Manual Testing: Manual testing, on the other hand, relies on human testers to execute test cases. While it may be time-consuming and less efficient for repetitive tasks, manual testing has its own merits:

* Exploration: Testers can use their intuition to explore the application, finding unexpected issues.
* Usability testing: Human testers can evaluate the user interface and overall user experience.
* Adaptable: Manual testing can adapt to changing requirements and UI changes.
* Common Automation Testing Tools

**2 Explore some of the most common automation testing tools available on the market?**

Several automation testing tools are available in the market, catering to different needs and preferences. Some popular ones include:

* Selenium: An open-source tool for automating web applications, supporting multiple programming languages.
* Appium: An open-source tool for automating mobile applications on iOS and Android platforms.
* JUnit and TestNG: Frameworks for Java-based test automation.
* Cucumber: A BDD framework that promotes collaboration between developers and non-technical stakeholders.
* Postman: A tool for testing APIs and automating API test cases.
* TestComplete: A comprehensive automation tool for web, mobile, and desktop applications.

**3. What is Cross Browser Testing?**

Cross Browser Testing is a critical aspect of ensuring that a web application functions consistently across different web browsers and versions. This involves testing an application on various browsers such as Chrome, Firefox, Safari, Edge, and Internet Explorer. Cross-browser testing tools like BrowserStack and CrossBrowserTesting help automate the process by allowing testers to simulate user interactions on different browsers and platforms. This ensures that the application's functionality and appearance remain consistent, improving the user experience.

**4. Write a Blog on TDD and BDD?**

Test-Driven Development (TDD): TDD is a software development approach where tests are written before writing the actual code. The TDD cycle typically follows these steps:

* Write a failing test case that describes the desired behaviour.
* Write the minimum amount of code to make the test case pass.
* Refactor the code to improve its structure while ensuring the test still passes.
* Repeat this cycle for each new feature or enhancement.

Behaviour-Driven Development (BDD): BDD is an extension of TDD that focuses on the behaviour of the software from a user's perspective. It uses a more natural language, often referred to as "Given-When-Then," to describe software behaviour. BDD encourages collaboration between developers, testers, and non-technical stakeholders. Tools like Cucumber and SpecFlow help implement BDD practices.