Test automation is a technique that uses specialized software tools to execute test cases and compare the results with expected outcomes. It allows for the automation of repetitive and time-consuming testing tasks, which can lead to more efficient and effective testing. One of the main advantages of test automation is that it can be used to execute regression tests. Regression testing is the process of ensuring that previously working features continue to work after changes or updates are made to the system. Additionally, test automation can also be used to test large and complex systems that would be impractical or impossible to test manually. Other benefits include the ability to perform parallel testing, which can significantly reduce the overall testing time. However, it is important to note that test automation is not a replacement for manual testing and should be used in conjunction with manual testing to ensure complete testing coverage. Test automation is often adopted in projects that have a mature codebase, or projects that require a lot of regression testing.