Good afternoon, everyone. Today, we will be presenting the Quality Assurance process followed by Inova IT System, with a focus on how they use Selenium as their automation testing tool.

Inova IT System is a leading software solutions company known for its innovative and reliable digital products. They specialize in building enterprise applications with a strong focus on quality and performance. As part of their development process, Quality Assurance plays a key role in delivering trusted software to their clients.

At Inova, Quality Assurance is not just a final step—it is an essential part of the entire development lifecycle. QA helps ensure that the software meets client expectations, works without major bugs, and provides a smooth user experience. It also supports faster development through early bug detection and efficient collaboration between teams.

Inova follows a structured QA process that includes several key stages: first, understanding the requirements, followed by planning the tests, designing test cases, and setting up the environment. After that, tests are executed—both manually and automatically. If bugs are found, they are reported and tracked. Finally, the process ends with test closure and reporting.

At Inova IT Systems, QA process begins with a thorough understanding of the project requirements. The QA team collaborates with business analysts and developers to ensure that every requirement is clear, complete, and testable. This step helps to identify any quality risks early and sets the foundation for effective testing.

Once the requirements are understood, they move into the test planning phase. Here, they prepare a detailed test plan that defines testing objectives, scope, schedule, tools, and resources. They also identify roles and responsibilities within the QA team. At Inova, they also assess risks and plan accordingly to ensure smooth execution.

With a test plan in place, QA engineers begin designing test cases. These are written based on the requirements and include clear steps, expected results, and preconditions. They also use a Requirements Traceability Matrix to make sure all requirements are covered by one or more test cases. This helps to maintain complete traceability throughout the testing process.

Before testing can begin, they set up the test environment. This is a replica of the production system and includes all necessary hardware, software, and test data. At Inova, they often use tools like Docker to ensure consistency and reliability across different test environments.

Now begin executing the test cases. This includes both manual and automated testing depending on the project. They log the results and compare them to the expected outcomes. Any issues found during this phase are reported immediately. Tools like Selenium and Postman are commonly used at Inova to streamline this process.

When defects are found, they are reported using Jira, our preferred tracking tool. Each issue is detailed with steps to reproduce, severity, and screenshots if necessary. The defect goes through a life cycle—starting from New to Assigned, Fixed, Retested, and finally Closed. This ensures every issue is resolved efficiently.

Finally, they generate detailed test reports to track the progress and quality levels. These include test coverage, pass/fail rates, and defect statistics. At Inova, they use dashboards and tools like TestRail to give stakeholders real-time visibility into the testing process. These reports help us make data-driven decisions

Selenium plays a major role in Inova's automation strategy. It is open-source, supports multiple browsers, and can easily integrate with other tools like TestNG and Jenkins. Inova

uses Selenium to automate common features like user login, form submissions, and search functionality. This helps speed up the testing process and improves reliability.

To build a stable and maintainable test suite, Inova uses a hybrid test automation framework with Selenium. This includes tools like WebDriver, TestNG for managing tests, Maven for dependencies, and Jenkins for automation pipelines. The framework is designed to allow reuse of test components and manage tests efficiently.

Here's a simple example of how Selenium is used at Inova: When a developer finishes a feature and commits code to Git, Jenkins triggers the Selenium test suite. Selenium runs automated tests in a browser, and the results are shared with the QA and development teams. If any bugs are found, they're logged for fixing.

to conclude, Inova IT System has a strong QA process that blends both manual and automated testing. Selenium plays a key role in making their test process faster, more reliable, and scalable. Their approach helps them deliver high-quality software solutions to clients around the world.