Automated testing is, well, automated. This differs from manual testing where a human being is responsible for single-handedly testing the functionality of the software in the way a user would. Because automated testing is done through an automation tool, less time is needed in exploratory tests and more time is needed in maintaining test scripts while increasing overall test coverage.

The benefit of manual testing is that it allows a human mind to draw insights from a test that might otherwise be missed by an automated testing program. Automated testing is well-suited for large projects; projects that require testing the same areas over and over; and projects that have already been through an initial manual testing process.

There are many tools for automation testing. For example, Selenium, Appium, Cucumber, Test studio, Rational function testing, Tricentis Tosca, RSpec and so many. For our project We will use Selenium for automation project.

Selenium automates browsers. That's it! What you do with that power is entirely up to you. Primarily, it is for automating web applications for testing purposes, but is certainly not limited to just that. Boring web-based administration tasks can (and should!) be automated as well.

Selenium has the support of some of the largest browser vendors who have taken (or are taking) steps to make Selenium a native part of their browser. It is also the core technology in countless other browser automation tools, APIs and frameworks.

Test will be done under the automation testing.

1. Multi-tier functionality to support thousands of concurrent user sessions.
2. Large-scale Integration: Typically, a banking application integrates with numerous other applications such as Bill Pay utility and Trading Accounts.
3. Complex Business workflows.
4. Real-Time and Batch processing.
5. High rate of Transactions per seconds.
6. Secure Transactions
7. Robust Reporting section to keep track of day to day transactions
8. Strong Auditing to troubleshoot customer issues
9. Massive storage system
10. Disaster / Recovery Management.

The above listed ten points are the most important characteristics of a Banking application.

Banking applications have multiple tiers involved in performing an operation. For Example, a banking application may have:

1. Web Server to interact with end users via Browser
2. Middle Tier to validate the input and output for web server
3. Data Base to store data and procedures
4. Transaction Processor which could be a large capacity Mainframe or any other Legacy system to carry out Trillions of transactions per second.

If we talk about testing banking applications, it requires an end to end testing methodology involving multiple software testing techniques to ensure:

1. Total coverage of all banking workflows and Business Requirements
2. Functional aspect of the application
3. Security aspect of the application
4. Data Integrity
5. Concurrency
6. User Experience