

Assignment 2: Automated Testing

Testing Techniques 2024 – 2025

In this assignment you will develop a test automation environment for your System Under Test (SUT) and you will execute automated tests. Follow the numbered questions provided below in the given order, and write your answers in a report. Your answers shall be well-motivated, yet concise and to the point. Please make sure that the text is well readable and consistent throughout. The total length of the core of the report should not exceed 7 pages (appendices with test cases, test results, logs, etc. are allowed).

1. Describe, design, and develop an automated test execution environment for your SUT. Use any additional tools that you think are useful, e.g., search the Web for test execution tools, tools that can access (test) interfaces, tools that can make observations, tools that help in making stubs or mocks, scripting languages, shell scripts, protocol sniffers, ...
2. Update your *test architecture* of Assignment 1 to take into account the test automation, including an updated test architecture diagram.
3. Implement the test cases that you developed for manual testing, so that they can be executed in your automated test execution environment. If some manual test cases cannot be automated, then explain why, and develop some new test cases.
4. Test your SUT with the automated test cases (test scripts).
5. Analyze and discuss the test results.
6. Compare the results with the manual execution, and explain differences. Consider effort, time spent, test results, quality of results, coverage.
7. Evaluate your automated test execution environment.
8. Provide the code, in such a way that we can run it; provide a 'README'. Be prepared to give a demo.