

D03 – Performance testing Requirements

Requirements for levels C, B, and A

- Item 1. A document that describes the costs of your project. The rest of the documentation is expected to be provided in your project management system and your source code, where appropriate.
- Item 2. A conceptual model and a UML domain model regarding project “Acme Hacker-Rank”.
- Item 3. An Eclipse/Maven project that fulfils the requirements in project “Acme Hacker-Rank”. The project must include a functional test suite. Regarding Requirement #9.1 (An actor that is authenticated as a company must be able to manage their positions), the suite must include at least five positive test cases and five negative test cases; for the remaining requirements, the test suite must include at least one positive test case and one negative test case per use case. Every test case must be documented in the code using the following information: a) requirements tested; b) in the case of negative tests, the business rule that is intended to be broken; c) analysis of sentence coverage; d) analysis of data coverage.
- Item 4. A performance test suite that fulfils the following requirements: a) There must be at least one jMeter test case per use case; b) There must be a report in which you analyse the maximum performance of your system. The report must include a description of the computers on which the tests have been performed and screenshots where appropriate.
- Item 5. A script to create the corresponding database in the pre-production environment and a war artefact that implements your project. The war artefact must be deployable and runnable on domain “www.acme.com”.
- Item 6. A deployment to Clever Cloud ready to be used. Don’t forget to include a readme file with the URL to check your project and the administration URL (including your credentials).

NOTE: please, recall that it’s mandatory that you project complies with the EU GDPR, except for the obligation to hire a data officer. Please, consult the evaluation procedure for further details.

Requirements for level A+

Please, select only one item, the one you prefer. If you’re planning on earning an A++, select an item as A+ and the other as A++.

- Item 7. We’ve studied how to record a script that emulates a user interacting with our web information systems. Unfortunately, the data that we enter in the forms is recorded, too, which means that every time a script runs, the same data is used once and once again. jMeter allows to use CSV files to provide data to the forms. To earn your A+, you must deliver:
 - a. A report in which you explain how this jMeter mechanism works. The report’s expected to be 1 000-word long; illustrations are strongly recommended.
 - b. A test case in which you use this mechanism.

- Item 8. There are some companies that offer a service that consists in running jMeter performance tests in a distributed manner. If you deploy your system to Clever Cloud and then run your tests in a distributed manner, this may help you have a better picture of how your system behaves in as a realistic setting as possible. To earn your A+, you must deliver:
- a. A report in which you list several similar services, select one, and justify the reason why. You must provide your credentials to have access to that service so that the lecturers can check your A+.
 - b. A report in which you analyse the maximum performance of your system.