

D10 – Performance testing

This document describes Deliverable “D10 – Performance testing”, whose deadline is April 17, 2015 at 23:59h. Please, recall that you must produce your deliverable and upload it to the USE’s e-learning platform by the deadline; failing to produce your deliverable in time amounts to failing the subject.

We, the lecturers, assume that if you submit this deliverable, then you understand what the consequences are if you lie regarding the following items, where "I", "me", "my", and other first-person pronouns refer to you, the student who is reading this document:

[x] I’m the legitimate author of this deliverable; I’m not cheating.

[x] If I have some partners, then I’ve collaborated with them on producing this deliverable; in other words, neither am I riding their coattails nor gobbling them up.

[x] I’ve learnt from working on this deliverable, so that I can pass my control checks.

[x] I’ve organised the deliverable according to the guidelines that are available in document “On your deliverables.pdf”, which is available at the USE’s e-learning platform.

[x] I’ve made sure that this deliverable fulfils the requirements to get a/an A (C, B, A, or A+).

[x] I fully understand that my deliverable will be considered failed if I fail to meet any of its requirements, or if I do not deliver a filled, dated, and signed copy of this document.

[x] I fully understand that failing this deliverable amounts to failing the subject.

(Please, check the previous items and write the level of your deliverable. It’s compulsory that you fill in this form and that you date and sign it; otherwise, your deliverable won’t be evaluated, which amounts to failing the subject.)

<https://repositorio.informatica.us.es/svn/4h7g4vplnp93atdjggg>

URL of your deliverable in ProjETSII

Sevilla, 16/04/2015

32

Place, date

Juan Carlos Pérez García

Julio Carmona Ferri

Group number

Raúl C. Díaz León

Javier Carmona Ferri



Authors’ names and signatures

Instructions

Please, select a level and produce the items that are specified below:

- Level C: Items 1-6 regarding the C-level requirements of project “Acme Essay Contest”.
- Level B: Items 1-6 regarding the C- and B-level requirements of project “Acme Essay Contest”.
- Level A: Items 1-6 regarding the C-, B-, and A-level requirements of project “Acme Essay Contest”.
- Level A+: Items 1-6 regarding the C-, B-, and A-level requirements of project “Acme Essay Contest”, plus Items 7 and 8.

The lecturers will evaluate your results as follows:

- Regarding laws:
 - They'll check that your project complies with the minimum requirements that we've presented in the lecture notes about the following laws: LOPD, LSSI, and Transpositions, except for keeping your files and communications secure and confidential.
- Regarding management:
 - They'll check your project in ProjETSII. They'll check that you have a project, and that you've created and reported on the appropriate tasks. Don't forget to report on the time that you spend at your lectures, at co-ordination meetings, or at studying your lessons.
 - They'll pay special attention to checking that the tasks were created at reasonable moments and that the reports happened at reasonable moments. In other words, a project in which every task and report was created on the last day will not be accepted.
- Regarding documentation:
 - They'll check that you've produced a document with an estimate of the total number of hours you've spent in this project and the total cost expected.
 - They'll check that you've produced a good conceptual model.
 - They'll check that you've produced a good UML domain model.
 - They'll check that you've produced comments in your code where appropriate, e.g., to document complex queries.
- Regarding JSP views:
 - They'll check that you're using customs tags to make your views more compact and less error prone.
- Regarding query efficiency:
 - They'll go through your repositories and check that you've defined appropriate indices for your domain entities.
- Regarding hacking:
 - They'll go through your services to check that you check the principal in order to prevent GET hacking.
 - They'll analyse your views and form objects, as well as your controllers and services to check that you're preventing POST hacking.
 - They'll make sure that your forms do not suffer from SQL injection or cross scripting.
- Regarding functional testing:
 - They'll check that you've followed the guidelines that we've provided regarding how to organise test cases, test classes, and test suites.
 - They'll run your test suite and will check that JUnit does not report any exceptions, that is, it must show a green bar.

- They'll go through your test cases and will check that you have at least a positive and a negative test case per functional requirement or group of related functional requirements. **IT IS MANDATORY THAT YOU DOCUMENT EACH TEST CASE;** Otherwise the lecturers won't be able to find out what they are intended to test. Please, copy the functional requirement(s) that it is intended to test as a comment at the beginning of your test cases; add a short remark regarding what the test case is intended to test.
- They'll check that you've followed the guidelines that we've provided regarding how to design test cases.
- They'll check that your test cases are completely automatic, that is, that they do not output any information to the console and that every check is performed by means of the appropriate assertion.
- Regarding performance testing:
 - They'll check that you have produced at least a performance test per functional requirement.
 - They'll check that your scripts don't have any spurious entries.
 - They'll check that you've added timers to simulate sensible human delays.
- Regarding the requirements:
 - They'll run your project as indicated in document "On your deliverables.pdf", which is available at the USE's e-learning platform.
 - They'll check that you've implemented every information and functional requirement well.
 - They'll enter as much invalid and malicious data as possible in the edition forms, just to check that you keep them under control.

Requirements

- Item 1. Deliver a report with the tasks that you've accomplished to produce this deliverable. The report must list the name of every task, the moment when it started, the moment when it finished, and the number of hours spent on it. It must also report on the total time spent in the project and the total cost.
- Item 2. Deliver a conceptual model and a UML domain model regarding your project.
- Item 3. Deliver an Eclipse/Maven project that fulfils the requirements in the Acme Essay project statement, including your functional tests.
- Item 4. Deliver a script to create the corresponding database in the pre-production environment and a war artefact that implements your project and can be run on domain "www.acme.com".
- Item 5. Deliver your jMeter performance tests.
- Item 6. Deliver a report in which you make it explicit what the maximum workload that your system can handle is. Please, add screenshots to prove that you've run your test cases and that you've monitored your system while the test cases were running.
- Item 7. In the theory lecture, 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. Study how this feature works and deliver at least a performance test that uses it.
- Item 8. Deliver a report in which you explain how to configure jMeter so that it can read the input data from a CSV file.