

Elaboration 1 Task Sheet

The Tutoria Project

You have completed the Inception phase of your project and now move into the next phase of the UP: Elaboration. This is the most challenging UP phase, in which you deal with major technical issues and deliver a documented core executable. You will perform Elaboration in two iterations to take the Tutoria platform to the LCA milestone.

The major objectives of the Elaboration Phase in the UP are:

- to refine your understanding of requirements;
- to establish a proven, executable architectural baseline;
- to mitigate major risks.

To achieve those objectives your team must:

- revise your specification of requirements and, if necessary, add detail or adjust scope;
- design, implement, test and baseline the architecture. Establishing a baseline means creating an executable architecture that you are confident will be able to support the application. It also means that, given the current requirements, it is extremely unlikely you will need to change this architecture during the remainder of development. In the Tutoria project, the Django framework supplies the architecture and resolves the majority of architectural issues. However, you need to master the framework and determine how best to implement your project within it.

In your Risk Lists it is likely you highlighted some risk associated with use of Django. You may also have identified risks associated with uncertainties in requirements and scope. The first iteration of Elaboration will focus on implementing thin vertical prototypes to drive down the first risk. Since the prototypes will be executable and can be demonstrated to users and clients, they will also help drive down the second risk.

Description: Iteration 1 (E1) of Elaboration

In Inception, you documented four key use cases and provided fully-detailed descriptions of all success scenarios for those cases. In E1 your team will analyse, design and implement partial realizations of two of those use cases: Book Session and Cancel Session. For each case, you will realize one particular success scenario. Depending on how you scoped Book Session, you may need to implement success scenarios of other use cases to deliver the required realization: the overall scenario you will implement involves a student viewing all tutors (as a result of not specifying any search criteria), navigating to a detailed profile of a regular (private) tutor and booking a session with that tutor. For Cancel Session you will implement the scenario of cancelling a session with a regular tutor.

Deliverables (E1):

1) Analysis models

Work from the two success scenarios for this iteration and perform the following:

- a) construct a System Sequence Diagram for each of those scenarios – two SSDs in total.
- b) identify a set of conceptual classes. Construct a partial Domain Model in the form of a single Domain Class Diagram showing conceptual classes, attributes and associations relevant for those scenarios.

2) Design models

Since your principal focus in this iteration is to gain sufficient expertise with the framework to implement end-to-end functionality, you will not provide a full set of design models for your vertical prototypes. You will deliver only the following to outline your design:

- a class diagram documenting the Django model classes you create to realize the use case scenarios;
- sequence diagrams showing how elements of your realizations (such as views, URLconf components and models) interact within the framework to provide the request/response cycles required by the scenarios.

3) Implementation

Implement your design. Your goal is to create a working increment of a thin slice of the final product. The UI should be functional but need not be beautiful – your focus should be on mastering the framework. You will not submit your code at the end of this iteration but you will be asked to demonstrate your implementation as shown in the project schedule.

4) Supplementary Specification

Begin work on this document based on the template posted in Moodle and suggestions given in class. If any section of the template is not relevant for Tutoria you may omit it.

5) Updated Artefacts

If you need to update your Use-case Model, Risk List, Vision and Scope document or Glossary, make your revisions and submit new versions of those documents. You are developing iteratively and incrementally, and every iteration provides an opportunity to correct, modify or extend artefacts produced in earlier iterations.

Handin Method: Please upload to Moodle a zipped file containing new and modified documents and diagrams as described above with two hard copies delivered to our TAs as soon as possible afterwards.

Deadline: October 28 (Saturday), 23:55