

Group Design Project

Work Plan and Deliverables

Week 1 – Familiarization (Mar 19 – Mar 23)

The objective for this week is to become familiar enough with the project to describe:

- architectural and structural features,
- potential risks,
- the key features and other important content from the existing backlog,
- the key scenarios currently supported by the project, and
- the core domain elements.

To support and document this investigation you will need to:

- Download and build the project.
- Install a code coverage tool,
- Run the test suite to capture coverage statistics
- Install a static analysis tool and use it to identify potential trouble spots in the code,
- Create a domain model that includes the top 10 – 20 most important objects,
- Create a high-level use case diagram, supported by
- Write detail level scenarios for the top 10 to 20 scenarios,
- Write a short document that identifies 3 to 5 features you might design (or redesign).

Deliverables (Due Mar 10 a.m. Mar 26)

Artifact	Individual	Group
Submit via Canvas:		
<ul style="list-style-type: none">• A draft top-level structural diagram, consisting of at least one of the following: a package diagram, a deployment diagram, or a component diagram. If your project has separately deployed components, you must include a deployment diagram and one of the other two.	2 person partnership #1	
<ul style="list-style-type: none">• A written report of what you consider the most significant problems uncovered by the static analysis tool. Identify the smell, the code involved, and why you think it is particularly serious.	2 person partnership #2	

<ul style="list-style-type: none"> • A use case diagram that represents the scenarios in the next item 		x
<ul style="list-style-type: none"> • Written, detail level scenarios for the top 10 to 20 scenarios. Be sure to settle as a group on a template. Your template should include a field that identifies the scenario's author. 	Each team member should write one fourth of the submitted scenarios	
<ul style="list-style-type: none"> • A short document that describes three to five features your team might design and what you think they differ in difficulty, risk, and value. 		x
<ul style="list-style-type: none"> • A domain model showing the domain elements most important to satisfying the scenarios written above. 		x
<ul style="list-style-type: none"> • A tabular summary of these code metrics: count of non-comment lines of code, number of classes, number of packages, number of test classes, number of individual test cases, cyclomatic complexity (for highest scoring class). 		x
Bring (as part of a working build) to your coaching session:		
The automated test results. Be prepared to show them run and discuss the results.	2 person partnership #1	
A summary (keep a notebook) of any issues you encountered and questions you might have.		x
The static analysis results (ready to demonstrate a repeat run if asked). Detailed requirements to follow.	2 person partnership #2	
A proposed set of tasks for week 2.		x
Key outcomes for coaching session		
<ul style="list-style-type: none"> • Selection of features to design/redesign. • Feedback for improving the documents. • Individual and partnership commitments for next week's tasks 		

Week 2 – Impact Analysis(Mar 26 – Mar 30)

The objective for this week is to deeply investigate the selected project feature(s), propose a draft design, and do a first cut impact analysis

Deliverables, due April 2 at 10 a.m.

Artifact	Individual	Group
Submit via Canvas:		
<ul style="list-style-type: none"> Detailed Scenarios for feature candidates 	at least one from each individual. Competing proposals are encouraged.	
<ul style="list-style-type: none"> Draft domain model showing revisions (i.e., new domain elements and domain elements that are expected to change) to support the new/revised scenarios. 		x Alternatives are encouraged.
<ul style="list-style-type: none"> An analysis of the quality of existing code associated with the affected domain elements 	partnership #1	
<ul style="list-style-type: none"> An analysis of existing tests that might be affected by the affected domain elements 	partnership #2	
<ul style="list-style-type: none"> A description of refactorings (design adjustments) that you think will ease the implementation or testing of the new/revised feature. 		x
<ul style="list-style-type: none"> A summary of key risks, what potential cost they carry, and what you might do to mitigate the risk or the potential cost. 		x
Bring to your coaching session:		
<ul style="list-style-type: none"> Your current working build 	each individual should be prepared to demonstrate a working build and the ability to execute existing tests.	
<ul style="list-style-type: none"> Design and work plan alternatives you would like to discuss. You will need to estimate times for this plan as part of next week's work. 		x
<ul style="list-style-type: none"> A list of tasks you think are necessary during the next week 		x
Key outcomes for coaching session		
<ul style="list-style-type: none"> Resolution of all tool chain issues. Feedback for improving the documents. Final team commitment to a specific design/project scope. Individual and partnership commitments for next week's tasks 		

