

Milestone 3: Sprint 2

The goals of this phase are:

- to produce the final release of the system according to the sprint backlog and to the project plan;
- to use mechanisms to check whether the system under development satisfies the evaluation criteria as defined in Gherkin scenarios;
- to produce a manual of the final version of the system;
- to revise the risk list and project plan, including configuration management, and validation and verification aspects.
- to critically assess the software life cycle in terms of general quality attributes and viable trade-offs presented within the given problem.

Work products

1. Sprint backlog as a list of Gherkin features that cover the full application. Detailed scenarios for each feature that has been implemented. (4 marks)

Marking criteria: Do the features cover the full scope of the application. Do user stories explain the main purpose of the feature? Is the main actor clearly identified? Are detailed scenarios of each functional feature covered? Are scenarios testable? Is there a clear correspondance showing which features are implemented in your system.

2. Updated and complete design documents. All design object models from other worksheets updated to reflect decisions made during the project. Summary of the key design decisions that were made by the group, and reflection on how well they worked. Summary of what was done (or should have been done) when designing the application to help with performance and security (any sense of performance and security that you think is relevant to this application). (18 marks Max 3000 words)

Marking criteria: Are all the models clear and accurate? Does each model provide the information that it ought to? Are the models consistent with each other and the final system? Have you identified important design decisions e.g. algorithms, APIs or data structures that you have used? Is the explanation and justification clear? Is the writing consise and precise? Have you understood the importance aspects of security and performance for this applications and how design decisions can affect them?

Regarding the security layer: Does the access control strategy include how authentication is implemented? Are the data structures to be used to implement access control been identified and specified and justified? Where in the system will they be implemented? Is the access control strategy aligned with the object design?

3. Project plan: including revised project plan, test plan, configuration management plan, revised risk assessment. For each, the document should report the final outcome for the project, e.g. the project plan with completion values, and status of the risks and actions). (10 marks)

Marking guidelines: Is each plan a usable document? Is the plan at a level of quality and detail as required for a project of this size? Is the final status accurate and realistic? Is the final status clear (e.g. embedded in the plan document rather than a 'write up' at the end?)

4. Minutes of internal and supervised meetings - excluding those already submitted in the earlier phases (2 marks)

Marking criteria: Do they record attendance? Are they well structured? Have the main decisions taken during each meeting been described? Are they clear, concise and informative? Have the actions to be taken in the corresponding next week been identified and assigned to team members according to their roles?

5. Sprint 1 retrospective: At the end of Sprint 1 you performed a retrospective. You should write up your conclusions and actions and submit them (3 marks)

Marking criteria: Have the things that you identified real, relevant and specific to your group/project. Are the actions that you have decided upon something that your group can realistically carry out? Will the actions have an impact on group performance? Do the issues span a significant range of the team's activities (e.g. not all related to coding)?

6. Sprint 2 retrospective. Carry out a sprint retrospective in your own time towards the end of the project and report the results (as if you were continuing on the project into a 3rd sprint) (4 marks)

Marking criteria: Have the things that you identified real, relevant and specific to your group/project. Are the actions that you have decided upon something that your group can realistically carry out? Will the actions have an impact on group performance? Do the issues span a significant range of the team's activities (e.g. not all related to coding)?

7. User Manual and Installation Guide (Max 3000 words 2 marks)

Is the guide clear and concise, and covers the important aspects of the system? Would the guide allow different users to easily use the system? Does the installation guide clearly describe all of the steps required to set up and run the system?

8. Presentation: layout, cohesive format and layout, structure (2 marks)

Marking guidelines: Is there a table of contents with browsable links? Has a formatting style been applied consistently? Are all diagrams readable? Is the format of references appropriate?

9. Software artefacts:

- (a) System source code (30 marks).

Marking guidelines: Have the requirements in the sprint backlog been implemented? Is the implementation consistent with the software architecture and design? Is the code well documented? Have coding styles been applied? How are they tested? Has the code consistently compiled throughout the project? Does the functionality deliver a coherent and complete system?

- (b) Automated Testing: Define Gherkin features and scenarios the application. Implement the step definitions for these. (15 marks)

Marking criteria: Do the tests/features cover the application? Do the scenarios provide high coverage of tests that would discover possible bugs? Are the tests well structured so that they can be easily browsed and understood. Are the step definitions well written to allow additional tests to be added? Have the tests consistently passed throughout the project?

10. Individual Essay: Focusing on your own contribution, provide a critical evaluation of teamwork processes in the project (max. 1000 words, 10 marks) Discuss the development process that was followed, including what was learnt, what activities did not go as planned and what steps could be improved. Focus on your involvement rather than generally about the group. Explain how the experience you obtained in this project can be used in your career plan. In particular, you may consider one of the following questions and discuss it in detail:

- (a) Communication: Describe a situation when you communicated effectively, what did you do?
- (b) Teamwork: Think of a time when you worked in a team to achieve a common goal, what did you contribute to the team and how did this enable the team to achieve its objective?
- (c) Problem-Solving: Describe an example of a problem you encountered and what you did to overcome it?
- (d) Project Management: Describe a time when you took responsibility for delivering a major task; what actions did you take to achieve the desired result?
- (e) Creativity: Describe a situation when you contributed a new idea to a task or project, how did your input enable the team to develop and improve its approach?
- (f) Adaptability, flexibility and persuasion: Describe a occasion when you had to adapt your thoughts and ideas to effectively influence others?

- (g) Dealing with pressure, self management: Give an example of a complex piece of work you had to complete against tight time pressures, what did you do to ensure that you completed the work by the due date?

You might find it helpful to use the CAR technique to formulate your response:

- Context: describe the situation and the task.
- Action: describe the action you took, your role, what you contributed.
- Result: the outcome, what was achieved including the impact on the project and/or team.

Marking criteria: If using CAR: Does the answer relate to the question? Is the answer clear? Did you describe the context for your answer clearly? Did you describe the problem, your input, and the result? Did you give concrete details of the situation, or was the answer rather abstract and generic? How novel, individual and interesting was your response to the problem? Was it clearly the result of individual reflection, or rather a standard response dressed up to look like individual reflection? If drawing on established sources, such as self-help guides, did you include references and citations?

Assessment

For this deliverable you will receive an individual mark, which will be the mark that contributes towards your final individual mark, i.e. 40% of the coursework mark.

Each team member is responsible for carrying out a fair share of the work involved in the worksheet wrt the marks assigned to each work product. These contributions have to be stated in the task completion form. Specifically, in a group of seven people, each person should be involved in a share of work products worth 14.25 marks, and in a group of eight people, each person should be involved in a share of work worth 12.5 marks. Work products delivered by teams of seven people are expected to be of higher quality than those delivered by smaller teams, although this may not be necessarily the case in practice, and their assessment will be more rigorous pro rata.

Submission procedure

The document that will be assessed must be available as a wiki page in the GitHub repository of your group by Thursday 28 April 2016, 9:00am. This document should contain sections that clearly correspond to each of the work products described in this worksheet.

Before the deadline you must create a tag of your group repository in Github:

1. Open the repo in Github
2. Click **Releases**
3. Click **Create a new release** (or **Draft new release** if you did this before)
4. Enter the **Tag Version** as `ws1` (leave **@ Target Master**)
5. Enter the **Release Title** as `Worksheet 3 submission`
6. Click **Publish Release**
7. Copy the URL for that release (it will end `/release/tag/ws3`).
8. Make your submission to Blackboard by accessing the assessment for Worksheet 3 and entering:
 - the URL as a **text submission**
 - the task completion form as an additional file (only `xlsx` or `csv` format)