UNIVERSITY OF TECHNOLOGY, SYDNEY

48440 Software Engineering Practice

Agile Design, Implementation and Testing Assignment 2

Software Engineering Practice (SEP) Project

Due Date: **Softcopy Due before showcase by Monday the 15/10/2018 (12 Noon). No extensions will be awarded to this deadline. Showcases will be held in the respective workshops during Week 12**

Submission: Each group will submit the following two items:

- **Report:** Softcopy (Microsoft Word File) of the group assignment 2 project report containing the SEP project design, implementation and testing details, updated agile software development plan, and individual contribution logbooks via Turnitin by **Monday the 15th October 2018 (12 Noon AEST)**. Use the Assessment item 2: Agile Design, Implementation and Testing Turnitin link (View/ Complete) on UTSOnline (in assignment 2 folder) for submitting your assignment report.

- **Software:** Working software code will not be submitted via Turnitin. Submit SEP project software files as a single zip file in the UTSOnline Assignment 2 "Working Software Code Submission" folder using your relevant workshop link **Monday the 15th October 2018 (12 Noon AEST)**. **You can submit the software only once. You must not make any changes once the software code is submitted. If you make any changes then late assignment rules will be applied.**

Naming Pattern: Each group will submit the following two items:

Your project report and code submission files title/name must follow the following **naming pattern**.

SEP - Wrk1 - your workshop activity number – student id – group id

SEP and Wrk1 are constants or fixed. For instance, if your Wrk1 activity number is 02 (see timetable for your activity), student id (project leader) is 12345678 and group id is 5 then your submission file title/ name must be worded as SEP-Wrk1-02-12345678-5. From each group only one student (project leader) should submit the assignment on the behalf of the whole group. You do not need to put the student ids of all the group members on the file title.

Each group must present in your respective workshop during Week 12. The presentation schedule will be posted on UTSOnline. You are also required to provide the copy of the executable working software (including source code)

on a USB stick (USB stick will be returned to you after the presentation) to your tutor during your presentation. This will be used to check whether you have made any changes since you submitted the original software files.

You must check assignment Turnitin report and ensure that your project report does not contain plagiarism. You may submit your project report to Turnitin many times before the submission date. Final Turnitin reports can be used as evidence by the teaching staff in the event that plagiarism is suspected in an assignment and will be dealt as per University rules. **Do not allow anyone to copy your solution as this is considered misconduct; all miscreants will receive a mark of 0, at best for the report and will be dealt as per University rules**.

In summary, the assignment assessment includes a group presentation of the report and working software (zero defects) during the relevant session (showcase) as per subject weekly workshop schedule. Keep a record of your assignment artefacts and weekly standup meetings during workshops. You may be required to provide the hard copy or soft copy of the assignment anytime during and after six months of the semester. See subject outline for details.

Marks: 60%

Word Limits: There is no word limit. It is not an essay. Therefore, it is not about the number of words or pages. Assignments in this subject are looking for quality and to-the-point professional work excluding unnecessary information or brain dump. You can express yourself in 20 or 200 pages, it is up to you. No student will be advantaged or disadvantaged by being less or more words or pages. **Focus on quality and not on the number of pages and words.**

Workload: Each student is expected to allocate 9-12 hours per week for this subject. Each student in a group must take the fair share of the workload.

Method: The assignment will be done in a group (preferably in the same workshop and same group as for assignment 1). Group size should be limited to a maximum of no more than 6 students (unless approved by the coordinator). If you want to change the group, then it is solely your responsibility to make other arrangements and find another alternative group who is willing to accept you. **This is a group assignment and you must respect other students in the same group, different groups and teaching staff. If you have any group issues then you must inform your tutor as soon as possible and well before (at least 1 week or earlier) the assignment submission or due date. Group assignment issues reported on or after the assignment submission date may not be considered. There will be zero tolerance for any academic and non-academic misconduct. See University Rules, Subject Outline and Academic Misconduct section of this brief for details**.

Objectives: Subject objectives: 1, 2, 3, 4, 5 and 6

1. Apply the principles and methods of software engineering in practice
2. Apply critical and analytic thinking to the planning, execution and evaluation of the software development process
3. Use automated tools to support the software development process
4. Demonstrate creative thinking in the design of industry strength practical software solutions
5. Communicate effectively to diverse audiences.
6. Work in small teams

Criteria: The assignment will be assessed based on the following criteria.

Criteria Items	Objectives	Weight
Working software implementation and Demonstration **(40 Marks)**	1,2,3,4	70%
Design **(6 Marks)**	1,2,3,4	10%
Testing **(6 Marks)**	1,2,3	10%
Planning and Stand up meetings (Weekly Progress) **(6 Marks)**	1, 2, 4, 5, 6	10%
Overall Software Quality **(2 Marks)**	-	5%
Total (60 Marks)	[1-6]	100%

The on-line tool SPARK shall be used to assess an individual's contribution to assignment. This means the group mark for the Assignment 2 shall be scaled by the individual's SPA as described in the Subject Outline. The rating period for SPARK assessments **Assignment 2, will open on Monday the 1st October 2018, and close on Monday the 22nd October 2018.** Please be advised that if you fail to provide a rating via SPARK during the declared rating period, you will receive anywhere between 00.0 and 0.5 (50%) of the assessed group mark for the Assignment 2. Individuals who filed to provide true rating or "abuse" the SPARK assessment methodology will also receive anywhere between 0.0 and 0.5 (50%) of the of the assessed group mark for the Assignment 2. **Students will also complete and provide the self-assessment sheet to the markers during the showcase before the start of their presentation.** Please read carefully the Assessment section of the Subject Outline. **Please also note that there will be no negotiation on a wrong answer**.

Task: This assessment task will require a team of 4-6 students to produce, submit and present a group report, working software and individual contribution logbooks. Based on the earlier agile plan, requirements and architecture (submitted for Assessment Items 1), each group shall:

i. do the software system design for release 1 only (you are not required to submit the design for other releases);
ii. implement and test the software system for release 1 only (Use live deployment, live database and automated testing: Acceptance and Unit).

iii. Submit and demonstrate (present) project report (including individual contribution logbook) and working software during showcase for release 1; and

iv. Track and update the project plan based on the software implementation and demonstration during weekly stand-up meetings in the weekly scheduled workshops.

Weekly Stand-up Meeting in the Workshop (Planning and weekly groups progress) (6 Marks)

Tutor will play the role of a product owner for this assignment. Each team will bring and present (team leader/ scrum master) the agile design, software implementation & testing work-in-progress for the current iteration in hand according to their plan (release and iteration plan) and get feedback from the product owner during the workshop, and update the plan and related items based on the feedback. Each team will be given 15 minutes for the weekly stand-up meeting. Students will answer the following questions during the stand-up meeting:

In-Workshop Weekly Stand-up Meeting Activities:

- What did we (team) plan for last week?
  - Show plan for the iteration in hand and any changes)
- What did we do (individuals in a team) in last week?
  - Demonstrate/ present software to tutor
- What will we do (team) in next week?
  - Show plan for the next week (iteration in hand and any changes)
- Are there any impediments?
  - Record and communicate any issues/ risks and actions to resolve those issues

Duration: 15 Minutes
Sign off: Product owner to make a note on weekly stand-up meeting sign off sheet on above items for each team. Students can take a photo of that note and attach to their report as an evidence for obtaining the marks for the "**Planning"** part. Each project leader (scrum master) is required to sign off the weekly timesheets in the end of this session and attach it to final report as an evidence for obtaining the marks for the **"Planning"** part.

Summary
Students may choose to work in a lab or from home. Each group shall explore different ways of ensuring quality outcomes through the agile development and testing approach. This can be supported through a set of software development and testing tools. Please note that the work done in the Assignments 1 is a starting point for students to produce the working software and report in Assignment 2. Working software must be developed and tested based on the plan, requirements and architecture produced for release 1 during the assignments 1. Students must get feedback on their work-in-progress project from their tutors (product owners) during the workshop sessions before formal submission.

Assignment 2 Deliverables

Assignment 2 includes the following deliverables and report structure with marks distribution scheme:

SECTION/ ITEMS	Maximum Marks	Note
Cover Sheet & Header Page	-	Sign, scan and embed FEIT declaration of originality cover sheet containing correct group name, student #, names and signatures in the report just before the project title/header page. If you do not include these then assignment will not be marked and you may receive zero for the whole assignment.
Design	**6**	
Interaction Design Model	(2)	Provide user experience design (UXD) model for release 1 user stories using agile UXD design techniques (e.g. user or customer journey).
Object Design Model	(2)	Provide object class design model (business logic, interface classes, attributes and methods) for release 1.
Backend Database Design Model	(2)	Provide back-end database design model diagram with all the tables, normalised relationships (if relevant) and attributes for release 1.
Testing	**6**	
Testing Results	(4)	Document 1 acceptance test criteria for each user story (release 1) from assignment 1. Record acceptance test case (linked to a user story), and test results in the test matrix (e.g. excel spread sheet or MS word table). Note: Integrate use the documented test cases to plan the automated acceptance and unit testing modules.
Defect Log	(2)	Keep a log of the failed acceptance test cases in a table or spread sheet. Defect log should have at least following items (you are allowed to include additional items). NOTE: Use automated testing logs

SECTION/ ITEMS	Maximum Marks	Note
		Defect ID (DI001) Defect Description (e.g. problem and action) Defect Date Test Case ID (e.g. Failed test case id) Tester Name (e.g. who reported the defect) Responsible (e.g. who will handle the defect) Status (e.g. identified, assigned, in progress, resolved, unresolved defects) Comments (any additional comments) Summary: total defects, % of resolved defects, % of in progress defects
Software	**40**	
Working Software Implementation and Demonstration	(40)	Develop the software using any programming language and platform for only release 1 user stories. Working Software (implementation) will be assessed against the planned user for release 1 during the show case (demonstrate). If you have implemented the code but did not demonstrate (present) during the planned showcase, then you shall **receive zero marks for this section.** **Implementation** Each student must take a fair share of coding/ implementation of the software. If as a team member you did not work on this component, then you will receive zero individual marks for this whole section (0 out of 40). **Deployment** Groups must utilize software live deployment approach for their project. Software applications can either be deployed on a live server or cloud. **Database** Groups must use live database storage for their generated data during deployment. We recommend that you populate the database storage prior to showcase. Database (SQL or NoSQL) can be hosted on a live server or cloud. **Testing** Groups must integrate automated

SECTION/ ITEMS	Maximum Marks	Note
		testing (Acceptance testing and Unit testing) in their project. Test results should be integrated in the report as well as defect logs generated during deployments and automated testing runs. Groups must ensure that the testing modules can be successfully deployed with the software project. NOTE: DevOps testing tools are encouraged to complete this task. **and** **Demonstration** You must demonstrate (present) working software (from your laptop) during showcase and submit working software code before assignment 2 due date. If as a team member you were not present during the showcase for demonstration, questions and answers then you will receive zero individual marks for this whole section (0 out of 40). **Note:** Please note that if the software failed to compile or run during the presentation or you did not present the software during the scheduled showcase time then zero marks will be given for this item. You must not embed the code in this report. This section is just a placeholder in this document. You do not need to write anything here in the work document.
Planning	**6**	
Project Tracking	(5)	Each team is required to weekly present work-in-progress to their product owner (tutor) during the in-workshop weekly stand-up meeting and get sign off. You must attend all the weekly in-workshop stand-up meeting for claiming marks for project tracking. Product owner to make a note on weekly stand-up meeting sign off sheet on above items for each team.

SECTION/ ITEMS	Maximum Marks	Note
		Students can take a photo of that note and attach to their report as an evidence for obtaining the marks. **Note:** Track progress and report on project schedule and cost. e.g. include updated project schedule, cost, highlight any changes, issues and comments. Provide a burn down chart for your project.
Timesheet and Estimation (R0-R1)	(1)	Each team is required to complete and submit the timesheets for each team member signed by their project lead. **Note:** Assuming each student in the SEP project team is working 9-12 hours per week for this project. Rate is fixed at $80 P/H.
Appendices – Individual Contribution Logbooks	-	Include contents from the Individual Contribution Logbooks. Link your individual contribution to weeks and hours recorded in timesheet. See subject outline for details. You can also provide any additional information in this section.
Overall Quality	**2**	Overall quality of group report. Overall quality of the software implementation. Overall quality of the software demonstration (presentation). You are not required to prepare and submit the presentation slides. Bring and present the submitted report from Turnitin and working software from your laptop to your marker or tutor.
Total Maximum Marks	**60**	

How to do this assignment?

You must use the Assignment 2 Report Template or Structure (as explained above) for documenting deliverables, and additional documents and information released with this assignment brief on UTSOnline in the Assignment folder. Use study material discussed during the workshops as a guide for doing this assignment. You must regularly get feedback on the assignment tasks and deliverables from tutors during the scheduled workshop sessions.

Assessment Feedback

Feedback on the marked assignments will be within 2 weeks after the assignment due or submission date.

Minimum Requirements

Students must have submitted all the Assignments to pass this subject. The individual contribution logbook is mandatory for students to submit with each Assignment: Assessment Items (1-2) to receive individual project marks. If a student does not submit this logbook, then he/she will receive zero for their project mark. If you obtain a mark of >= 50% for the subject but have not submitted the compulsory assessment item as per the above, you will be awarded a Fail (X) grade for the subject. See subject outline for further details and assessment.

NO conceded passes are to be granted due to University Policy.

Referencing Standards

All material derived from other works must be acknowledged and referenced accordingly using the Harvard Referencing Style (see http://www.bell.uts.edu.au/referencing/harvard_system).

Late Penalty

See subject outline for details. There is a 10% per day late submission penalty, unless an extension has been approved by the subject coordinator. Assignments more than 5 days late will not be marked and will receive zero unless special consideration has been sought and granted.

Special Consideration

Special consideration, for late submission, must be arranged beforehand with the subject co-ordinator (**email: Farookh.Hussain@uts.edu.au**).

Please also see the UTS Special Consideration Process:
www.sau.uts.edu.au/assessment/consideration

Special Needs:

Students should email the subject coordinator as soon as possible (and prior to the assessment deadline) to make them aware of the impact on them meeting assessment component/requirements, and that they are seeking assistance through UTS Special Needs as detailed in Section 5.1.3 of Procedures for the Assessment of Coursework Subjects.

Academic Misconduct:

Students are reminded of the principles laid down in the "Statement of Good Practice and Ethics in Informal Assessment" (pages 5 & 6 of the Faculty Handbook). Unless otherwise stated in a specific handout, all assessment tasks in this subject should be your own original work. Any collaboration with another student (or group) should be limited to those matters described in **"Acceptable Behaviour"** section of the Handbook. For essay questions,

students should pay particular attention to the recognition of **"Plagiarism"** as described in that section of the Handbook (page 6). Any infringement by a student will be considered a breach of discipline and will be dealt with in accordance with University rules. Penalties such as zero marks for assignments or others may be imposed.

Please also see the subject outline in conjunction with UTS policy and procedures for the assessment for coursework subjects, available at:
www.gsu.uts.edu.au/policies/assessment-coursework.html

Please also see the UTS policy and procedures "Section 16 - Student Misconduct and Appeals" available at:
http://www.gsu.uts.edu.au/rules/student/section-16.html

Querying Marks/Grades and Final Results

If a student disagrees with a mark or a final result awarded by a marker:

- where a student wishes to query a mark, the deadline for a query during teaching weeks is 10 working days from the date of the return of the task to the student
- where a student wishes to query an examination result, the deadline is 10 working days from the official release of the final subject result.

More information can be found at:
https://my.feit.uts.edu.au/pages/course/student_policies_rules

ELSSA

If you think you need help with your English for this subject, contact the English Language Study Skills Assistance (ELSSA centre) level 18, Tower building, Broadway, phone: 9514 2327.