UNIVERSITY OF TECHNOLOGY, SYDNEY

48440 Software Engineering Practice

Agile Analysis, Planning and Architecture Assignment 1

Software Engineering Practice (SEP) Project

Due Date: **Softcopy Due by Wednesday 30/08/2017 8:55 AM AEST**
Showcases on Thursday 31/08/2017 and Friday 01/09/2017
(During Related Workshop – See subject outline for exact dates)

Submission: Each group will submit the following two items:

Report: Each group will submit a softcopy (Microsoft Word File) of the group assignment containing SEP project agile requirements analysis, planning, architecture and individual contribution logbooks via Turnitin **before 30/08/2017 8:55 AM AEST**. Use the Assessment item 1: Agile Analysis, Planning and Architecture Turnitin link (View/ Complete) on UTSOnline for submitting your assignment.

Prototype: Working software prototype code will not be submitted via Turnitin. Submit SEP project working software prototype code files (source and executable) with readme file (how to deploy and run the software) as a single Zip file in the UTSOnline Assignment 1/ "Working Software Prototype Code Submission" folder using your relevant workshop link **before 30/08/2017 8:55 AM 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 after the submission due date then the late assignment rules will be applied.**

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

SEP-Wrk1-your workshop activity number – student id

SEP and Wrk1 are constants or fixed. For instance, if your Wrk1 activity number is 02 (see timetable for your activity) and student id (project leader) is 12345678 then your submission file title/ name must be worded as SEP-Wrk1-02-12345678. 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. You must check Turnitin report and ensure that your work does not contain plagiarism. You may submit your report to Turnitin many times before the submission due 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 – 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**.

You may be required to provide the hard or soft copy of the assignment anytime during the semester.

Marks: 30%

Word Limits: There is no word limit. Focus on quality rather on the number of pages and words.

Method: The assignment will be done in a group (preferably in the same workshop). Group size should be limited to a maximum of no more than 6 students (enrolment numbers and situation-specific circumstance will dictate the actual size of the groups). Groups will be formed in Weeks 2 and 3 with the help of your workshop teaching staff. It is not the responsibility of teaching staff to find a group for you; however, they would help you to put in a group. Once the groups are formed and for any reason(s) 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 workshop coach 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 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
Analysis (9 Marks)	1,2	30%
Planning (9 Marks)	1,2,6	30%
Architecture (9 Marks)	1,2,3,4	30%
Overall quality (3 Marks)	5	10%
Total	-	100%

The on-line tool SPARK shall be used to assess an individual's contribution to the group report. This means the group mark for the Assignment 1 shall be scaled by the individual's SPA as described in the Subject Outline. The rating period for SPARK assessments, Assignment 1, will open on **30/08/2017 11:55 PM AEST and close on 08/09/2017 11:55 PM** AEST. 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 1. Individuals who "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 1. 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 analyse the approved SEP Agile Project; and produce, submit and present a group report containing agile software requirements specifications, plan, and architecture; and working software prototype. The deliverables of this assessment task also include an oral/visual group report and prototype presentation (no PowerPoint slides) and individual contribution logbooks - see Subject Weekly Schedule. Students may choose to work in a lab or from home.

Each SEP project team needs to nominate a project manager/ lead and come up with a project idea/ proposal that they'd like to implement and submit for SEP 48440 (latest by teaching week 3). The uniqueness or newness of the project idea is not a requirement for SEP. The project must not be similar (architecture, design, codes, etc.) or have not been submitted for any other subject or course at UTS or somewhere else (such as SDP etc.). Each team will document the project idea using the provided project idea template example (see **UTSOnline in Assignment S 2017 folder**). Team will submit it to coach for feedback and sign off and approval in week 3 workshop. The role of the coach covers the customer, coaching and program management perspectives.

Assignment 1: Consolidated Report Structure for Deliverables

SECTION/ ITEMS	Maximum Marks	Note
Cover Sheet, Header Page and Approved Project Idea Proposal	-	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. Scan and embed project idea/ proposal with project scope. Identify at least 4-6 processes, services or features for your project (see travel funding case study example). Document project scope items (process, service or feature, role) in the adaptive project backlog table. Note: At least 1 service/feature per team member. Each service or feature can be broken down into a number of user stories.

SECTION/ ITEMS	Maximum Marks	Note
		If you do not include these then assignment will not be marked and you may receive zero for the whole assignment.
Agile Requirements Analysis	**9**	**Requirements Backlog Spreadsheet**
Functional Requirements	(6)	Break down the processes, services or features into user stories (linked to project scope items) for the whole project and capture them in the agile requirements traceability matrix or backlog. See the requirements backlog template. Write narratives/details (see project schedule) using the use case template for only iteration 1 release 1 user stories or at least each student in a group write narrative for 1 user story of their choice. See the use case template example. Document the rest of the user stories later for release 1 in your own time.
Data Requirements	(2)	Document data requirements using the data dictionary template.
Non-functional Requirements	(1)	Identify and capture at least 2 performance and 2 security requirements for the to-be developed project system as user stories in the agile requirements backlog.
Agile Planning	**9**	**Agile Project Schedule, cost estimates & timesheet**
4.2 Project schedule	(6)	Decompose the whole project schedule into 2 releases. Decompose each release into 3 iterations and additional iteration 0 in each release. Calculate the project, release(s) and iteration(s) start and end dates Estimate and prioritise user stories identified for the whole project. Develop the user story map. Select the user stories in consultation with your coach as minimum viable product for release 1.

SECTION/ ITEMS	Maximum Marks	Note
		Select the user stories in consultation with your coach for each iteration of release 1. Develop iteration 1 card wall. Develop iteration 1 schedule.
4.3 Project cost estimates	(2)	Calculate the cost estimates for the whole project. Calculate the cost estimates for each release. Calculate the cost estimates for iteration 1 of release 1. **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.
4.4 Project timesheet	(1)	Each student to complete and submit the timesheet 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.
Agile Architecture	**9**	**Agile Architecture Models and Software Prototype**
Data Architecture	(3)	Based on the data requirements, provide and describe the conceptual data model diagram (without attributes).
Application and Infrastructure Architecture	(3)	Model and describe overall SEP project level architecture, release 1 level architecture (sub-set of the project architecture) and iteration 1 of release 1 level architecture (sub-set of the release 1 architecture). The model diagram(s) should show architecture components and their relations following relevant architecture pattern (s). You may use whiteboard, UML or any other architecture modelling or description notation or language or tool for architecture diagram. **Note:** You can have either 1 diagram showing overall project, release 1 and

SECTION/ ITEMS	Maximum Marks	Note
		iteration 1 architectures or one diagram for each level of architecture (3 diagrams in total).
Architecture Spike (Software Prototype)	(3)	Develop the software prototype by partially implementing the architecture components/ layers (e.g. interface, application logic, and database). You can partially implement 1 or 2 features for the software prototype.
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.
Quality	**3**	Quality of visual/oral group report and software prototype presentation. You are not required to prepare and submit the presentation slides. You should just need to prepare and bring the flip charts/ posters describing agile plan, requirements backlog spreadsheet, architecture models and software prototype. Launch and present the report submitted via Turnitin. Present software prototype from your laptop.
Total Maximum Marks	**30**	

You should use the Assignment 1 Report Structure (as explained above) as a guide for documenting deliverables, additional documents and information released with this assignment brief on UTSOnline in the Assignment folder.

You should regularly get feedback on the assignment tasks and deliverables from the coaches during the workshop sessions. Each student group should assume the role of a Software Provider Start-up Company for the SEP Project.

Assessment Feedback

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

Minimum Requirements

Students must attain a minimum mark of 50% in the assignment to pass. **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: asif.gill@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. See the UTS website for updated ELSSA address.