LSBU
EST 1892

Software Engineering Coursework Specification

Read this assessment brief carefully, it tells you how you are going to be assessed, how to submit your assessment on-time and how (and when) you'll receive your marks and feedback.

Module Code	CSI_5_SFE
Module Title	Software Engineering
Lecturer	Lucia Otoyo
% of Module Mark	100%
Distributed	31/01/2023
Submission Method	Submit online via Moodle site
Submission Deadline	Friday 24/03/2023 5pm draft for feedback (worth 10%) Friday 12/05/2023 at 5pm * final submission
Release of Feedback & Marks	Feedback and provisional marks will be available in the Gradebook on Moodle on 02/06/2023

* Module leader will be available for any troubleshooting related to coursework submission up to the deadline time however please submit well in advance in case you run into technical issues.

Coursework Aim:

This coursework is designed to provide you experience of team-based development of a software artefact for a client. This will involve working in teams to elicitate requirements, evaluate relevant legal, social and ethical issues, consider the economic and commercial context of the problem and solution, select suitable tools and methodology and then design, develop and test a working software system following recognised software engineering practices.

Coursework Details:

Deliverables:	Project team report (100%)
Word Count:	Project team report: max 6,000 words Title page, table of contents, references, bibliography and appendix will not count towards the word total. If the total word limit is exceeded your mark will be reduced as part of the report quality marking criteria.
Structure of your report:	1. Project Overview 2. Software Development Methodology 3. Requirements 4. Legal, social, ethical, economic and commercial considerations 5. Technical review 6. Design 7. Development 8. Testing 9. Team reflection Please see marking criteria on page 4 for detail on what should be included in each chapter. During the module as the topics are covered examples of the chapters will be provided, discussed and evaluated.
How are marks awarded:	The team mark will be awarded to each member of the team. However, based on a process of peer evaluation (see Resources section at the end of this specification), individual marks may be adjusted to reflect individual contributions (poor or outstanding) to the team project.
Presentation:	Work must be referenced, and a Reference list provided. Work must be submitted as a Word document (.doc/docx) or PDF. Course work must be submitted using Arial font size 11 (or larger if you need to), with 1.5 line spacing. Student number for each team member must be shown at the front of the coursework. Do not include your student names in the report.
Referencing:	Harvard Referencing should be used, see your Library Subject Guide for guides and tips on referencing.

| Regulations: | Make sure you understand the University Regulations on expected academic practice and academic misconduct.

Note that your work must be your own. To approach the work in the appropriate way, do the research and reading, and then write it up on your own, giving the reference to sources.

All quotations must be credited and properly referenced.
The source of all figures and graphs that you are using in any of the submitted material but that are not produced by you must be credited and properly referenced

Paraphrasing is still regarded as plagiarism if you fail to acknowledge the source for the ideas being expressed.

TURNITIN: When you upload your work to the Moodle site it will be checked by anti-plagiarism software. |
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Learning Outcomes

This assessment will fully assess the following learning outcomes for this module.

Learning outcome	Assessed
A. Knowledge and Understanding	
• Apply the main practices, techniques, notations and methodologies used in software engineering.	Fully
B. Intellectual Skills	
• Critically evaluate and compare software engineering approaches and techniques.	Fully
C. Practical Skills	
• Identify requirements and produce corresponding specifications and development plans for complex software systems.	Fully
D. Transferable Skills	
• Document systems in both technical and non-technical terms.	Fully

Assessment Criteria and Weighting

LSBU marking criteria have been developed to help tutors give you clear and helpful feedback on your work. They will be applied to your work to help you understand what you have accomplished, how any mark given was arrived at, and how you can improve your work in future.

Software Engineering CW Marking rubric

Team report (100% of CW)

	weighting	100% Beyond expectations	90% Exceptional	80% Excellent	70% Very good	60% Good	50% Average	40% Basic pass	30% Limited	20% Very limited	10% Very limited with major issues	0% No evidence
1. Project overview	5%	Description of the project problem, aim and objectives go beyond expectations.	Exceptionally well-defined description of the project problem, aim and objectives.	Excellent description of the project problem, aim and objectives.	Very good description of the project problem, aim and objectives.	Good description of the project problem, aim and objectives.	Average description of the project problem, aim and objectives.	Some description provided but may lack clarity or has omissions.	Description of the project problem, aims and/or objectives are not very clear or are incorrect.	Description of the project problem, aims and/or objectives have major omissions or errors.	Very little to no description of the project problem, aims and/or objectives provided.	No project description, problem, aims and objectives of the project provided.
2. Software Development (SD) Methodology	10%	Criteria for selecting a suitable SD methodology and suitable methodologies are researched, compared, and evaluated beyond expectation. Research is supported by outstanding, relevant, helpful and consistent references. Selected methodology is justified and how the methodology was followed is documented beyond expectation.	Criteria for selecting a suitable SD methodology is exceptional. Suitable methodologies are researched, compared, and evaluated exceptionally. Research is supported by excellent, helpful and consistent references. Selected methodology is justified and how the methodology was followed is exceptionally documented.	Excellent criteria for selecting a suitable SD methodology. Suitable methodologies are researched, compared, and excellently evaluated. Research is supported by excellent, relevant, helpful and consistent references. Selected methodology is justified and how the methodology was followed is excellently documented.	Criteria for selecting a suitable SD methodology is clear. Suitable methodologies are researched, compared, and evaluated. Research is supported by references. Selected methodology is justified and how the methodology was followed is very well documented.	Good evaluation and justification made with some evidence of research and some citations. Good documentation of the process being followed.	Average evaluation and justification made with some evidence of research and some citations and some evidence of process being followed.	Some elements may be missing or lacking clarity. Methodology may not be clearly defined or followed.	Limited evaluation provided and/or with omissions.	Very limited evaluation.	Very limited evaluation with major shortcomings.	No evaluation provided.
3. Requirements	10%	Beyond expectations requirements elicitation and professional documentation following the SD methodology selected. Requirements cover all key features of the system clearly and comprehensively.	Exceptional requirements elicitation and documentation following the SD methodology selected. Requirements cover all key features of the system clearly and comprehensively.	Excellent requirements elicitation and documentation following the SD methodology selected. Requirements cover all key features of the system clearly and comprehensively.	Requirements are elicited and very well documented following the SD methodology selected. Requirements cover all key features of the system clearly.	Requirements are elicited and well documented following the SD methodology selected. Requirements cover most of the key features of the system well.	Some requirements are elicited and documented at least partially following the SD methodology selected. Requirements cover some of the key features of the system.	Requirements either only partially cover the project, don't follow the SD methodology techniques, or lack clarity.	Limited requirements provided and/or with omissions.	Very limited record of requirements.	Very limited record of requirements with major shortcomings.	No requirements provided.

Criterion	%											
4. Legal, social, ethical, economic, and commercial considerations	10%	The code of ethics and legal requirements are considered, researched, and evaluated beyond expectations and the system is designed with these in mind. Wider societal, commercial, and economic considerations are discussed beyond expectations.	The code of ethics and legal requirements are considered, researched, and evaluated exceptionally well and the system is designed with these in mind. Wider societal, commercial, and economic considerations are discussed exceptionally well.	The code of ethics and legal requirements are considered, researched, and evaluated excellently and the system is designed with these in mind. Wider societal, commercial, and economic considerations are excellently discussed.	The code of ethics and legal requirements are considered, researched, and evaluated, and the system is designed with these in mind very well. Wider societal, commercial, and economic considerations are discussed very well.	The code of ethics and legal requirements are considered, researched, and evaluated, and the system is designed with these in mind. Wider societal, commercial, and economic considerations are discussed.	Average description for some of the considerations is provided.	Basic description for some of the considerations is provided.	Limited description or with omissions.	Very limited description.	Very limited with major shortcomings.	None provided.
5. Technical review	10%	Beyond expectations evaluation and justification for the technologies and tools chosen with relevant, helpful & consistent citations. Evaluation criteria is clearly defined and used for justification of the chosen technology stack. React, Flutter and Flask are reviewed beyond expectations.	Exceptional evaluation and justification for the technologies and tools chosen with relevant, helpful & consistent citations. Evaluation criteria is clearly defined and used for justification of the chosen technology stack. React, Flutter and Flask are exceptionally well reviewed.	Excellent evaluation and justification for the technologies and tools chosen with relevant, helpful & consistent citations. Evaluation criteria is clearly defined and used for justification of the chosen technology stack. React, Flutter and Flask are excellently reviewed.	Very good evaluation and justification for the technologies and tools chosen with relevant, helpful & consistent citations. Evaluation criteria is clearly defined and used for justification of the chosen technology stack. React, Flutter and Flask must be part of the tech review as a minimum.	Good evaluation and justification for the technologies and tools chosen with consistent citations. Evaluation criteria is defined and used for justification of the chosen technology stack. React, Flutter and Flask are part of the tech review as a minimum.	Some evaluation and justification provided with some evidence of research and the use of citations.	Some evaluation and justification provided although not very clear or completely correct and/or little evidence of research.	Limited description or with omissions.	Very limited description.	Very limited with major shortcomings.	None provided.
6. Design	10%	Client requirements are addressed beyond expectation. Designs are provided for three views, including UI designs. Designs are beyond expectations and feedback from the client/users is taken on board beyond expectations. A3 poster design is beyond expectations.	Client requirements are exceptionally well addressed. Designs are provided for three views, including UI designs. Designs are exceptional and feedback from the client/users is taken on board. A3 poster design is exceptional.	Client requirements are very well addressed. Designs are provided for three views, including UI designs. Designs are practical and feedback from the client/users is taken on board. A3 poster design is very good.	Client requirements are very well addressed. Designs are provided for three views, including UI designs. Designs are practical and feedback from the client/users is taken on board. A3 poster design is very good.	Client requirements are well addressed. Designs are provided for at least two views, including UI designs. Designs are practical and feedback from the client/users is taken on board. A3 poster design is good.	Client requirements are partially addressed. System designs are partial, have some omissions or errors. Designs are practical and have some evidence of feedback being implemented. Poster is provided.	Client requirements are partly addressed. System designs are partial, have omissions or errors. Designs may not be practical or have evidence of feedback being implemented. Poster is basic or missing.	Limited designs documented.	Very limited designs documented.	Very limited with major shortcomings.	None provided.

Criterion											
7. Development & Testing 20%	Development and testing is beyond expectations in terms of meeting client expectations, client feedback, video demonstration and the use of git by all team members.	Development and testing is exceptional in terms of meeting client expectations, client feedback, video demonstration and the use of git by all team members.	Development and testing is excellent in terms of meeting client expectations, client feedback, video demonstration and the use of git by all team members.	Test plan is comprehensive and test execution is evidenced very well. Developed software works, it meets the project requirements and client expectations very well. This is evidenced through client feedback. Key features of the development are demonstrated by providing a link to a video (max 8 mins) and a link to the deployed system if available. GIT versioning system is used effectively by all team members. Development is discussed and explained with the help of screenshots showing key stages and code snippets showing code for key features. Explanations provide an understanding of how the software operates.	Good test plan and evidence of testing is provided. Developed software works well. Video demonstration shows key features working. Git was used well. Good explanation of the development is provided.	Test plan and evidence of testing is average. Developed software partially works. Video demonstration only shows some features working. Git was used. Explanation of the development is provided.	Test plan and evidence of testing is limited. Developed software only partially works. Video demonstration only shows basic features working. Git may not have been used effectively or at all. Explanation of the development is limited.	Limited software development and testing demonstrated.	Very limited software development and testing demonstrated.	Little to none.	None evident.
8. Team Reflection 10%	Beyond expectations reflection provided evaluating the work undertaken and considering lessons learned and future work.	Exceptional reflection provided evaluating the work undertaken and considering lessons learned and future work.	Excellent reflection provided evaluating the work undertaken and considering lessons learned and future work.	Work undertaken and the extent to which the team have achieved the project objectives is critically discussed. It considers very well how the team might do things differently next time with the benefits of hindsight, and what the team would do next to develop the project further if they had more time.	Good reflection provided evaluating the work undertaken and considering lessons learned and future work.	Some reflection provided on the work undertaken considering lessons learned and future work.	Reflection is basic and descriptive.	Limited.	Very limited.	Very limited with major shortcomings.	None provided.
9. Report draft submitted by W9 10%	Beyond expectations draft report with requirements, methodology, technical review, and design chapters is submitted by week 9.	Exceptional draft report with requirements, methodology, technical review, and design chapters is submitted by week 9.	Excellent draft report with requirements, methodology, technical review, and design chapters is submitted by week 9.	Very good draft report with requirements, methodology, technical review and design chapters is submitted by week 9.	Good draft report with requirements, methodology, technical review, and design chapters is submitted.	Draft submitted, with majority of the chapters.	Some chapters are missing from the draft submission or are mostly incomplete.	Limited draft with most chapters missing.	Very limited.	Very limited with major shortcomings.	None provided.
10. Quality of Report 5%	Writing, structure, spelling, grammar, wordcount and referencing are beyond expectations.	Exceptional writing, structure, spelling, grammar, and reference formatting.	Excellent writing, structure, spelling, grammar, and reference formatting.	Very good writing, structure, spelling, grammar, and reference formatting with only minor errors or omissions.	Good writing, structure, spelling, grammar, and reference formatting with some errors or omissions.	Writing, structure, spelling, grammar and reference formatting may have some significant errors or omissions.	Some good writing, structure, spelling, grammar and referencing style but with many significant errors.	Poor writing with limited structure and/or poor spelling, grammar and/or referencing.	Very poor writing with limited structure and/or poor spelling, grammar and/or referencing.	Very poor writing with major issues and omissions with structure, major spelling, and grammar issues, wordcount, and/or no referencing.	No structure, incoherent writing style and/or no references.

How to get help

We will discuss this Coursework specification in class. However, if you have related questions, please ask a question on the general chat or contact: Lucia Otoyo (lucia.otoyo@lsbu.ac.uk)

Resources & Additional guidance

Example tools you can use to record your demonstration:
- **MS Teams**
- **QuickTime** screen-recording (tip: enable see click on the pointer, to allow the viewer to see where you are clicking on the screen)
- **Kazam** (simple)
- **OBS** (Open Broadcaster Software) **https://obsproject.com/** – free, open-source video recording and broadcast/streaming software
- **FastStone Capture** (simple)
- **Camtasia** (advanced)

Example platform where you can host your video:
- **YouTube** as unlisted or on our **LSBU SharePoint/OneDrive**

You can use any other tool or software you like but ensure that the video is not restricted and can be viewed by anyone with access to the link.

Peer Evaluation form
Performance Related Adjustment

To make sure that everyone contributes fairly to the work of the team you are asked to evaluate yourself and each of your fellow team members. You will be sent a link to an online system to complete this closer to the submission deadline.

Team code	e.g. L1	
Members	Names	Student Id
S1 (self)	Your Name…	Your ID…
S2		
S3		
S4		
S5		
S6		

5	4	3	2	1
Outstanding	Very Good	Good	Poor	Very Poor/none

Evaluation criteria	Student Mark (5, 4, 3, 2 or 1)					
	S1	S2	S3	S4	S5	S6
1. Attends group meetings regularly and on time						
2. Contributes towards success of the project						
3. Completes assigned tasks on time & to quality						
4. Cooperative and supportive attitude towards team						
5. Listens and contributes meaningfully to discussions						
Total score (add rows 1 to 5 above)						

Constructive feedback to explain any high or low marks awarded:

The scores from each team member for each individual team member will be added up and then compared with the average score for the group (maximum score is 25). Team mark awarded will then be adjusted for individuals based on their score.
**Tutor can make final adjustments to the marks based on CW1 self-reflection and in class observations. Individual marks can only go up by max 10 marks on top of the team report mark

Quality assurance of coursework specifications

Coursework specifications within CSI division go through internal (for new modules with 100% coursework also through external) moderation. This is to ensure high quality, consistency and appropriateness of the coursework as well as to share best practice within the CSI division.

Details of the moderators for this coursework specification are below:

Moderated (internal)	Aarbaz Alam, 17th January 2023
Moderated (CSI lead)	
Signed off by (HoD)	