BACS2033 Software Requirements Engineering – Assignment

1. Objectives

This assignment provides students with the opportunity to learn and apply the following skills;
- Identify and select stakeholders.
- Develop interview questions.
- Evaluate alternative options (qualitative and quantitative approach)
- Produce software requirements specification documentation.
- Ability to work as a team.

2. Assessment

The learning outcomes assessed is:
CLO 3: Produce Produce a requirements specification document for a project scenario with the support of software engineering modelling tools. (C3, PLO6)

Contribution of marks to coursework:
- Assignment report contributes **40%** to the coursework component (under CLO3)
  * Note: Tutor has the right to adjust the marks based on the % contribution by each team member.
- Presentation contributes **20%** to the coursework component (under CLO3).

Refer to the Assignment Rubrics for details.

3. Group Formation

Group yourself into a team of **4 - 5 persons (1 module per person)** per team for this assignment. Students are not allowed to change group without the permission from the respective tutor.

Every team member is expected to contribute and participate actively in the entire process of completing the assignment to develop **Software Requirements Specification (SRS)** documentation. Sharing of ideas and assistance in the completion of assignment among members is required.

4. Assignment Tasks for Report Part 1 and 2

Students are required to study and analyse an existing/legacy system (manual) of an organisation.

Assume that your team has been commissioned to initiate a project with the objectives to determine the existing system's problems and propose solution(s) on improving their business operations and performance. You are required to produce the software requirements specification document for a new information system (to replace the existing/legacy IS) for the organisation. The documentation should include:

Part 1

Stakeholder Analysis and Selection   [10 marks]

Discuss the factors that your project team would consider for **stakeholder analysis and selection.** Identify the *stakeholders* for requirements elicitation. Justify your choices. (one factor each member),

Elicitation Techniques   [10 marks]

Examine **questionnaire and interview** to elicit the requirements for the project. Suggest other *Elicitation Techniques* that your team would adopt for the proposed project. Justify your suggestions (minimum 2 techniques).

Questionnaire and Interview Question   [5 marks]

    i.   Assume that one of the elicitation techniques that used by your project team is Interview. Prepare the *Interview Questions* (at least 15 questions) for eliciting requirements for the project, explain the target stakeholder and rationale of the interview.

    ii.   Assume that your project team conducts questionnaire among the identified stakeholders. Prepare the *Questionnaire* for eliciting requirements for the project, explain the target stakeholder and rationale of the questionnaire.

Part 2

Requirements Analysis Approach [5 marks]

Discuss which *Requirements Analysis Approach* that would be adopted by your team for the project. Explain the suggested approach and justify your suggestion.

Managing the conflict of requirement [10 marks]

Discuss how would your team *manage the conflict* of requirements in the project. Identify and manage conflicting requirements for each module.

Qualitative and Quantitative Approach [10 marks]

Assume that your project team is going to use both *Qualitative and Quantitative approach* on evaluating alternative options/requirements. Give example(s) of alternative options/requirements that related to the project scenario to show the difference(s) between the two approaches.

Software Requirements Specification [30 marks]

Prepare the *Software Requirements Specification (SRS)* document for the project scenario. (Refer to the format covered in the lecture and the template given)

5. Assignment Schedule

Week	Practical Task	Deliverable
1	Briefing on practical assignment and forming of assignment groups Selection of an existing/legacy system (manual) of an organisation Briefing on SRS Template	NA
2	Identifying and selecting of stakeholders Requirement Elicitation techniques Interview Questions and Questionnaire development	Week 1's task(s)
3	Requirements Analysis Approach UML - Class Diagram	Week 2's task(s)
4	Functional Requirements and Non-Functional Requirements UML - Use Case Diagram UML - State Diagram	Week 3's task(s)
5	Conflicts management Evaluating alternative options (Qualitative and Quantitative approach) SRS Preparation	Week 4's task(s)
6	Assignment Report Submission – SRS Document Assignment Presentation	SRS Document Presentation Slides
7	Make-good (if any)	Assignment Feedback

6. Oral Presentation

Each student is required to do presentation of the assignment tasks during the practical classes as stated in Section 5: Assignment Schedule. Oral presentation MUST include MS PowerPoint slides.

7. The Final Assignment Report Format

The final assignment report for all Parts should contain the following items:
(a)   Cover sheet (Appendix - FORM 1)
(b)   Plagiarism statement with student signatures (Appendix - FORM 2)
(c)   Assessment Criteria (Group and Individual)
(d)   SRS (refer to format given in lecture)
(e)   Appendices (including Part 1)

The report must be type-written using **MS-Word**. You are recommended to format your report according to the following specification:

Media	Students are required to submit a **hardcopy** - well written and properly formatted report. Softcopy to be submitted to the Google Classroom assignment and **CD/DVD** which include all work/deliverables for Assignment Part 1and Part 2 report together with the hard copy assignment report as mentioned above.
Font Size	A body text of font *size 12* is required while for headings and subheadings a larger font size must be used.
Font Style	Use *Times New Roman* for body text. Main headings and sub-headings should be clearly stated using suitable font styles (e.g. Arial).
Line Spacing	Typed material should be *1.5-line spaced*.
Alignment	Use *Justify* for alignment.
Headers and Footers	Appropriate footers and headers should be used to enhance clarity and presentation.
Page Numbering	Ensure that all pages (except cover page) are numbered.
Paper Size	Use *A4* paper (29.7cm x 21cm).
Binding	2-hole plastic binder clip. Use only *one* side of the paper.

Table 1: Written Report Format

8. Submission Deadline

The final assignment report/SRS deadline (PDF version): **Monday, 23rd December 2024 (Week 6)**

9. Late Submission

Late submission of the assignment will be handled according to the Guideline for Late Submission of Coursework available at **TAR UC's Intranet→ Examinations and Credit Accumulation→ Undergraduate→ Guideline.**

PART B : LATE SUBMISSION OF COURSEWORK INFORMATION

Please check/tick one of the information below :

	Late submission of 1 - 3 days after deadline of submission: minus 10 marks
	Late submission of 4 - 7 days after deadline of submission: minus 20 marks
	Late submission of > 7 days after deadline of submission: 0 mark

In certain circumstances, a student may be allowed to submit the assignment late with valid reason. S/he must inform the respective tutor **at least one week before** the assignment is due. The tutor will evaluate whether the circumstance warrants submitting the assignment late, but **no guarantee** that the students will not be penalized.

As a general rule, no extension of time will be granted. The assignment question and its due dates are normally disclosed in advance to students in order that they will be able to manage their time according to different course study progress and complete this assignment on time.

10. Academic Integrity and Plagiarism

Students are required to redo the entire assignment (depending on the seriousness of inaccuracy of the answer or the result returned from Turnitin is more than 20%) if the contents of any part of the assignment does not comply with the requirements of the assignment as requested by the respective lecturer / tutor.

Before submitting your assignment, please make sure that you have complied with **TAR UC Plagiarism Policy**. Any cheating attempt to cheat, plagiarism, collusion and any other attempts to gain an unfair advantage in assessment will cause the students concerned to be penalized.

IMPORTANT: Students found to be dishonest are liable to disciplinary action.

Appendix

FORM 1

FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY

Bachelor of Software Engineering (Honours)

Programme: RSW (Group: ____)

Assignment

BACS2033 SOFTWARE REQUIREMENTS ENGINEERING

Name (Block Letters)	Registration No.	Signature	Marks
1.			
2.			
3.			
4.			
5.			

Tutor's Name: _____

FORM 2

FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY

Plagiarism Statement and Guideline for Late Submission of Coursework

Read, complete, and sign this statement to be submitted with the written report.

We confirm that the submitted work are all our own work and are in our own words.

Name (Block Letters)	Registration No.	Signature	Date
1.			
2.			
3.			
4.			
5.			