Faculty of Engineering and IT 31269 Business Requirements Modelling

Week 12 Workshop: Revision and Sample Exam

Objectives:

- 1. Revise key concepts and get overall feedback on assignment 2
- 2. Understand final exam structure through a sample exam

Tasks:

#	Task Description	Time
		(Minutes)
1	Quiz 10: Agile System Development	12
2	Quiz 10: Feedback by tutor	03
3	Go through the Final Exam format	05
4	Go through the Sample Exam questions	25-30
5	Student Feedback Survey (SFS)	05-10
6	Assignment 2 return and feedback	05-10
	Total Time	50-60

Task 1: Quiz 10 – Agile System Development (12 minutes)

Task 2: Quiz 10 Feedback by tutor (03 minutes)

Task 3: Final Exam Format – 05 Minutes

- **Duration**: 2 hours plus 10 minutes reading time
- **Total marks** for the final exam: 46 marks
- Open book exam
- **Permitted materials:** drawing instruments such as rulers, set squares and compasses. Any printed material such as lecture notes, books and written notes.
- Materials provided in exam: Examination paper and one answer booklet of 20 pages.
- **Format:** Final exam will be a combination of some short questions and questions based on a case study. Short questions will be much shorter than your weekly quiz questions. Followed by these short questions, you will be provided a small Case Study and would be asked to draw various models based on this case study.
- Minimum requirements to pass the subject: A student must gain a minimum of 50 marks overall (cumulative) from all assessment tasks (quizzes, assignments and final exam) in order to pass the subject.

• How to prepare:

- Revise lecture notes (all topics) to prepare for short questions. Please note that you will not find a straight answer to these short questions in the lecture notes. To answer these short questions, you need to understand the topic well. Do not spend too much time answering these short questions otherwise you may run out of time to finish answering the case study questions.
- Revise lecture notes to practice all the diagrams.
- Revise all your Workshop exercises and tasks and draw all those diagrams without looking at the solution provided to you.
- Revise both your assignments and attempt all its tasks without looking at your assignment submission.

Task 4: Practice the Sample Exam- 25 to 30 minutes

Note: The sample exam below is indicative only and the final exam may be a lot different than the one below. Please note the marks allocated to each question below are indicative only and the marks in final exam allocated for each question, and the number of questions could be a lot different compared to this sample exam. But in total the marks for the final exam will be 46 marks.

Note: Your final exam will begin with some short questions which will require a very short answer, in most instances it will require much shorter answer than you were required in your weekly assessable quizzes.

Followed by the short questions, you will be provided a small case study such as the one below for your workshops. Read this case study carefully and draw the various diagrams based on this case study.

Case Study: Order Processing System

The following activities take place in the Central Procurement Section (CPS) of the Stocking Stock Company with regards to their ordering process.

Submit Purchase Request

When the re-order point is reached for an item, Nigel Lon, the Stock Control Clerk calculates the new quantity to be ordered by referring to the past sales of that item over the last 12 months. He then fills in a Request to Purchase form and sends it to Mr Con in the CPS. Mr Con stores the purchase request details in a "Purchase Request File.

Get Quote

Mr Con first looks up the purchase history records (purchase file) to find out from where the item was bought last time, and then he looks up a suppliers file to see who else could supply that particular item. Based on the purchase request details, he then sends out a Request for Quote email to at least three supplier companies. Supplier companies send the Quote with item prices and delivery times to Mr Con in the CPS. Mr Con stores the Quote information in a Quote File.

Review Quote and Place Order

Mr Con reviews and selects the best supplier (based on quoted price), and prepares a purchase order. He sends the purchase order to his manager Mr Bert, who approves or disapproves the order. If the purchase order is approved, it is sent to the selected supplier. Mr Con stores the purchase orders details with their status (approved or disapproved) in the purchase file and also notifies Nigel Lon about the purchase order decision (approval or disapproval) via an email.

The current ordering process could take approximately 15 business days from Request to Purchase to actually placing an order with an appropriate supplier. About 5 days of this time is spent on the generation of "Request to Purchase". The Request for Quote may take 5 days. About 5 days of the time is spent on actually selecting and placing an order with an appropriate supplier.

NOTE: Questions 1 to 6 below are based on the case study "Submit Purchase Request" process. You are allowed to make appropriate assumptions about process activities and related data.

Question 1 (7 marks)

Draw a level 2 diagram for the above process "Submit Purchase Request" using the Business Process Model Notation (BPMN) techniques. Please note that "Submit Purchase Request" is only one of the several level 1 processes concerning the Order Processing System. You can make appropriate assumptions about process activities, if any.

Hint: Model or detail the process "Submit Purchase Request" by identifying the sub-processes or activities within it. You must use the concepts of BPMN pools and swim lanes when modelling this process.

Note for Questions 2 to 5:

The Stocking Stock Company would like to improve their current ordering process and relationship with the suppliers. The Stocking Stock Company would like to **introduce an online order processing system** and anticipates that the new online ordering system would help to reduce the overall ordering process time from 15 days to 10 days. This may result in the reduction of approximately 30% of the ordering cost. This will not only reduce the ordering time and cost but it is also expected to establish a stronger relationship with the suppliers and with the other departments of the company. You may need to identify changes and improvements that could be made to the current "Submit Purchase Request" process to **put it online**.

Question 2 (3 marks)

Using the template or format for User Stories, write a user story for the online process "Submit Purchase Request" from the stock control clerk's perspective.

Question 3 (10 marks)

Using the Use Case Narrative Template provided on the next page, write the Use Case Narrative for the new online process "Submit Purchase Request" which will improve their current ordering process and relationship with the suppliers. You must also document one alternate flow in this Use Case Narrative.

Copy the template provided (below) into your answer booklet and then fill it out. Do **not** modify the template in any way. If some sections in the template are **not** applicable, then leave them blank.

You need to narrate the included/extended/generalized use cases, if in case you have any. However, you do **not** need to draw a Use Case Diagram (no marks for the diagram).

Use Case Narrative Template

Use Case Name:

Post-conditions
Exceptions

ose case ivame.	
Use Case ID	
User Story	
Goal	
Priority	
Actors	
Pre-conditions	
Post-conditions	
Trigger	
Main Flow	
Exceptions	
Includes/Extends/Inherits	
Supporting Information	
Non-functional Requirements	
Alternate Flow 1	
Trigger	
Step	

Alternate Flow 2	
Trigger	
Step	
Post-conditions	
Exceptions	

Question 4 (7 marks)

Draw a Class Diagram for the online "Submit Purchase Request" use case narrative that you wrote for Question 3.

OR (the final exam may ask students to draw an ERD instead of Class Diagram)

Note: In the final exam you will be asked to draw either an ERD or a Class Diagram. The exam will clearly tell you which diagram to draw. So, prepare yourself for both diagrams.

Draw an Entity Relationship Diagram (ERD) for the online "Submit Purchase Request" use case narrative that you wrote for Question 3.

The ERD should specify entities, attributes (specify in data dictionary), relationship and cardinalities. If applicable, list any relevant assumptions related to attributes of the entities and the relationships between entities.

Capture data model elements using data dictionary template provided below. In the template specify all the entities, their attributes and specify the primary and foreign keys in the description.

Data Dictionary Template

Ref.	Data Element	Format	Length	Description		
01 Data E	01 Data Entity Name					
DE-1001	Name	Varchar	10	First name last name, mandatory		
				data, must be alpha,		
				e.g. John Smith,		
DE-1002	ID	••••	• • •	Primary Key,		
• • • • •						
02 Data E	ntity Name					
DE-2001						

Question 5 (6 marks)

Draw a Sequence Diagram for the online "Submit Purchase Request" use case narrative that you wrote for Question 3.

Hint: Read the main flow and identify the Classes/Objects and then identify the messages/methods.

Question 6 (5 marks)		
Draw a State Transition Diagram for the "PurchaseRequest" object.		
END OF SAMPLE EXAM		

Task 5: Student Feedback Survey (SFS) – 05 to 10 minutes

Please log on to https://www.sfs.uts.edu.au and fill in two surveys; one for the Lecturer and one for your Tutor.

Please let us know the following:

- Aspects of the subject and staff member that you liked (so that we can continue doing those things) and
- Areas of improvements or any suggestions to improve the subject.

Task 6: Assignment 2 Return and Feedback – 05 to 10 minutes

• Assignment 2 marks will be available on uts online gradebook just before the start of your respective workshop class. So, please check the marks for your group. Tutors will provide generic feedback for assignment 2. Students can ask their tutor questions if they have any for their marked assignment.

Weekly Quiz Marks: Has everyone checked their marks on uts online for the Weekly Quizzes? You must check them if you haven't yet. Please make sure that they are correct and up to date.

ALL THE BEST FOR FINAL EXAM.