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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2011/2012**

COURSE NAME : REQUIREMENTS ANALYSIS AND
SOFTWARE SPECIFICATION

COURSE CODE : BIT 3143/ BIT 31403

PROGRAMME : BACHELOR OF INFORMATION
TECHNOLOGY

EXAMINATION DATE : JUNE 2012

DURATION : 2 HOURS AND 30 MINUTES

INSTRUCTION : ANSWER ALL QUESTIONS.

THIS QUESTION PAPER CONTAINS FOUR (4) PAGES

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SECTION A

Instruction: Answer **ALL** questions.

- Q1** (a) Describe the meaning of an object-oriented system should be designed for integration. (4 marks)
- (b) Explain how a Business Process Re-Engineering (BPR) business process relates to the notion of workflow. (6 marks)
- (c) List **TWO (2)** differences between Rational Unified Process (RUP) and eXtreme Programming (XP). (4 marks)
- Q2** (a) Give **TWO (2)** advantages of brainstorming and Joint Application Design (JAD). (4 marks)
- (b) Discuss how actors used in a business use case diagram different from external entities in a context diagram. (6 marks)
- (c) Compare the object-oriented analysis and design models with the structured analysis and design model. (6 marks)
- Q3** (a) Develop an activity diagram for a typical customer ordering process for a stock-to-order business such as a catalog or an Internet sales company. (10 marks)
- (b) Explain the activity diagram based on your answer for **Q3 (a)**. (5 marks)

- Q4 (a)** Draw a use case diagram based on the context diagram in **Figure Q4** for a university class registration.

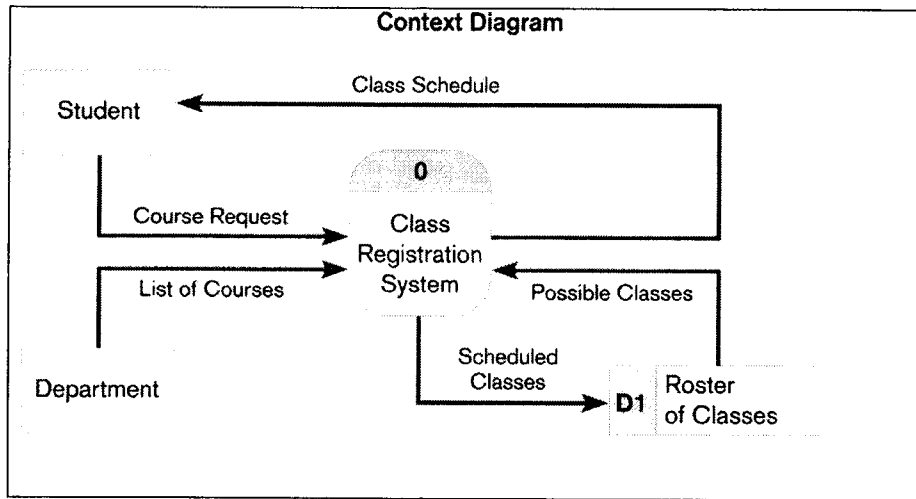


Figure Q4

(10 marks)

- (b)** Explain the use case diagram based on your answer for **Q4 (a)**.

(5 marks)

SECTION B

Instruction: Answer **ALL** questions.

Q5 Consider the following scenario:

Musixscore.com is an online service providing sheet music to customers. On the "browse music" Web page, customers select a genre of music from a dropdown list. The Web page uses Ajax to obtain a list of performers, musicians, or groups that match the genre, which is formatted as a drop-down list. When a selection is made from the performers drop-down list, the Web page uses Ajax to display a third drop-down list displaying all of the Compact Discs (CD) or other works of the performer. When a CD is selected, the Web page uses Ajax to obtain all the songs on the CD in a fourth drop-down list. The viewer may make multiple selections. When the Add To Shopping Cart image is clicked, the songs are added to the shopping cart. The viewer may change any of the drop-down lists to select additional sheet music, and the process is repeated. (Kendall & Kendall, 2011)

- (a) Write a use case description for the Browse Music Score use case to represent the activity.
(10 marks)
- (b) Develop a sequence diagram using presentation, control, and entity classes for the Musixscore Web page.
(10 marks)
- (c) Based on answer **Q5 (b)**, list of the messages, names and the parameters, along with the data types, that would be passed to the classes and the values that are included with the return message.
(10 marks)
- (d) Create a class diagram for the entity classes used in the sequence diagram.
(10 marks)