Daffodil International University

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Final Examination, Semester: Fall 2019
Course Code: CSE 321 (DAY), Course Title: System Analysis and Design

Time: 2.0 hours

Marks: 40

Answer all the questions

You must answer parts of a question sequentially. The figure in square brace at the right side of a question indicates the allocated to marks the questions.

1. Marry Jones owns a homeopathic medicine company called MediCare. She sells vitamins and other relatively nonperishable products for those who want choices regarding alternative medicine. Marry is developing a new system that would require her staff to be retrained. Given the information in figure:

Description	Task	Dependency	Time (Weeks)
Interview executives	A	None	6
Interview staff in order fulfillment	B	None	3
Design input prototype	C	B	2
Design output prototype	D	A, C	3
Write use cases	E	A, C	4
Record staff reactions to prototypes	F	D	2
Develop system	G	E, F	5
Write up training manual	H	B, G	3
Train staff working in order fulfillment	I	H	2

   a. Draw the Gantt/Bar Chart for her project. [4]

   b. Construct network diagram for her project and find the critical path and value for her project. [4]

2. Testy Food is a fast-food restaurant offering all kinds of potatoes. The manager has a 30-second rule for serving customers. Servers at the counter say they could achieve that rule if the form they must fill out and give to the kitchen crew were simplified. The information from the completed form is entered into the computer system at the end of the day, when the data entry person needs to enter the kind of potato purchased, additional purchased, the quantity, and the price charged. The current form is difficult for servers to scan and fill out quickly.

   a. Design and draw a input form (you choose the size, but be sensible) that lists possible potatoes and toppings in a manner that is easy for counter servers and kitchen crew to scan, and can also be used as input for the inventory/reorder system that is on the extranet connecting Speedy Spuds and Idaho potato growers. (*Hint:* Remember to observe *all* the guidelines for good form design.) [4]

   b. Design and draw an output form to display screen that can be used by the servers and clerks to fill in the information captured on the form. [4]

3.   a. Specify the purpose of the system testing. What performance criteria are used for system [4] testing? Discuss.

     b. Differentiate between white box testing, gray box testing and black box testing. [4]

4.   a. List five of the several measures an analyst can take to improve the security, privacy, and [4] confidentiality of data, systems, networks, individuals, and organizations that use ecommerce web applications.

     b. Define the terms physical, logical, and behavioral security, and give an example of each one [4] that illustrates the differences among them.

5.   a. How is disintermediation beneficial to customers in online shopping? Explain it with [4] example.

     b. What are the unique features of electronic commerce (e-commerce), digital markets, and [4] digital goods?