**FINAL EXAMINATION** 

| TERM | COURSE NAME | COURSE CODE | VERSION |
| --- | --- | --- | --- |
| Summer 2020 | Requirements Gathering Using OO Models | SYS366 | (version) |

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| Section | NAA |

DATE: August 10 – August 12, 2020

TIME ALLOWED: 36 hours

PERCENTAGE: 30%

TOTAL MARKS: 75

PROFESSOR(S): Apenteng, Elmankabady, Ukah, Zhian

SPECIAL INSTRUCTIONS:

1. Type your answers in the space provided.

This exam includes a *cover page*, plus 3 pages of questions.

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| SENECA’S ACADEMIC INTEGRITY POLICY |
| As a Seneca student, you must conduct yourself in an honest and trustworthy manner in all aspects of your academic career. A dishonest attempt to obtain an academic advantage is considered an offense, and will not be tolerated by the College. |

APPROVED BY:

Kathy Dumanski, Chair, School of SDDS

Choose one of the following companies and use their online presence to answer the following question.

Wayfair

The Home Depot

Mary Maxim

Your tasks are to document a scenario that would have been developed to aid developers and testers in creating the website and to answer questions related to the company overview. Please read the test thoroughly before you select your company.

**Part1:**

**Company related questions (15 marks):**

1. What is the name of the company? (1 mark)

**The Home Depot**

1. What does this company do? What goods or services do they provide? (2 marks)  
   **This company sells material and tool, and also rent cars for moving. Their services are:**

**- credit services**

**- Home services**

**- Rental**

**- Pro (job site delivery, curbsite pick-up)**

1. Provide the URL or App required to access the company’s online information (1 mark)  
   <https://www.homedepot.ca/en/home.html>
2. What is the company’s target market? Have you used their goods/services? Describe your customer experience or tell us when you would purchase what they are selling. (4 marks)

**The Home Depot is a company that sells furniture and appliances (electrical or household). likewise, they are also involved in the rental of cars for removals and the like. Plus, they also have rental contracts of equipment with the companies that will assist in organizing their event. at the end of our analysis, their target markets are:**

**- online businesses**

**- new and growing companies**

**I have already used one of their services which was job site delivery, it was very fine. So I order a mirror from The Home Depot, through my email they told me the date and the hour when my order was supposed to be delivered, and then I received an email to rate how my order was delivered which was good because other companies do not care about it.**

1. Who owns the company? Who are the directors or management? (4 marks)  
   **Bernard "Bernie" Marcus is the co-founder and owner of the home depot**. **The actual chairman, CEO and president is Craig Menear.**
2. Does the company have its own information technology department? Would you like to work there? (3 marks)

**Companies that do online business will absolutely have information technology department to manage their products information and so on. For my behalf, it will be a great pleasure to work for them because I will have a chance to put what would learn at school and everybody does not have that chance.**

**Part2:**

**Systems Use Case Specifications (50 marks):**

The website that you have chosen must allow the customer to enter and save data.

The scenario that you choose to write, must include data validation, save data and at least one loop. Placing a Customer Order for multiple products would be a good example.

Your specification must include 3 business rules that the company follows. You are allowed to list rules from the website that aren’t specific to your scenario.

Assume that the actor has accessed the website and has logged in.

# Casual Use Case Specification: UC237 – Maintain Customer Order

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**Brief Description:** This use case enables Store Manager and Store Staff to maintain customer’s order. They can add customer’s order, update customer’s order and query data.

# Section 1: Business Rule(s):

BR 237: Every Customer must be able to log in.

BR 238: Every Customer Order must be identified by a unique Customer Order ID

**Scenario 1: Add a customer’s order without error**

# Preconditions: Store Manager/ Sales staff is logged in the system and is able to access the main menu.

| **Step#** | **Actor (Store Manager/ Store staff)** | **System** | **Data Used** |
| --- | --- | --- | --- |
| 1 | Select ‘Maintain Customer Order’ from the main menu | ‘Maintain Customer Order’ menu is displayed with ‘Add customer order’ option available for user to select. |  |
| 1 | Select ‘Add customer order’ | Display list of customers  Prompt user to select a customer. |  |
| 2 | Select customer. | Data Validation:  One customer must be selected from the list.  Data is valid and saved.  Display product list along with the corresponding unit price  Prompt user to select a product | Customer  customerName |
| loop | Select product | Data Validation:  One product must select from the product list  Prompt user to add quantity for the selected product or exit | Product  productName  price |
| 4 | Enter the quantity | Calculate total price of the selected product.  Total product price= quantity specified by user \* unit price of the product  Display the calculated price of the selected product  Prompt to continue or exit | CustomerOrder  customerOrderID  date  customer: Customer  custOrdDtlSet: CustOrdDtl  CustOrdDtl  customerOrder: customerOrder  product: Product  quantity |
| 5 | Select continue | Display product list along with the corresponding unit price  Prompt user to select a product |  |
| end | Until exit is selected | Calculate total price of all selected products.  Total price of all selected products = sum of total product price of all selected products  Display the Total price of all selected products  Generate a unique order Id  Display ‘Maintain customer order’ menu |  |
|  |  |  |  |

**Successful Post-Conditions: Customer orders are added to the database.**

**Scenario 2: update a customer’s order without error**

BR 01: Order id will be removed from the customer order list when total price of customer order is zero after the update.

# Preconditions: Store Manager/ Sales staff is logged in the system and can access the main menu.

| **Step#** | **Actor (Store Manager/ Store staff)** | **System** | **Data Used** |
| --- | --- | --- | --- |
| 1 | Select ‘Maintain Customer Order’ from the main menu | ‘Maintain Customer Order’ menu is displayed with ‘Update customer order’ option available for user to select. |  |
| 1 | Select ‘Update customer order’ | Display list of customers  Prompt user to select a customer. |  |
| 2 | Select customer. | Data Validation:  One customer must be selected from the list.  Data is valid and saved.  Display Customerorder list.  Prompt user to select a customer order |  |
|  | Select customer order | Data Validation:  One order must select from the order list  Prompt user to update quantity for the products listed in the order or exit |  |
| 4 | Select the quantity | Recalculate total price of the individual product.  Total product price= quantity selected by user \* unit price of the product  Recalculate total price of all products in the selected order.  Total price of all products in selected order = sum of total product price of all individual products  Display the recalculated prices.  Prompt to save or exit without saving. | quantity  price |
| 5 | Select save | Save all the changes and Display ‘Maintain customer order’ menu |  |

**Successful Post-Conditions: Customer orders are updated to the database.**

**Classes and Data Used (10 marks):**

Customer

customerName

customerOrderID

date

customer: Customer

quantity

Product

productName

price

**Part3:**

**Problem Statement (10 Marks)**

Let us look back and envision the history of the project to develop the website that you’ve documented. The project of online customer orders was pitched to management and obviously, management felt that the project was worthwhile. If this were your idea, what would you have written as the problem statement?

|  |  |
| --- | --- |
| The Problem of | The Home Depot only sells the products on the spot, that is to say, that the customer has to travel to make his purchases which is a problem because the customer could live far away and arrive at The Home Depot either the product could be unavailable in the store where the customer is, the stock is finished or the company does not sell the product that the customer wants. |
| Affects | Owner, Employees and Customers. |
| The impact of which | Owner and Staff - extra work to recreate important documents, bills, department or others, potentially dissatisfied customers leading to a loss of income and reputation |
| A successful solution would | Provide integrated accounting, including general ledger, budgets, and invoice payments, as well as an easy-to-use and easy-to-install lesson and customer request planning system. A website connected to a database would facilitate the management of all this information; therefore, customers will receive all the information about our products without having to leave their homes. |