**Sales and Scheduling Test**

Please read the case study and answer the questions below.

* *Please submit only docx and vpp format. Two files only.*
* *Please note that submitted work, in any other format will not be graded.*
* *Your diagrams must be imported to the word document and must be readable with the name tags.*
* *If you don’t have your name tags with* 
  + ***your name,***
  + ***group number***
  + ***student number***
  + ***professor name***
  + ***date, name of the work (inventory test create purchase diagram etc)***

*in the diagrams you will not be graded for that work. (Every diagram should have this information)*

***This test is starting from***

**Tuesday 23rd of March @9am**

**till**

**Thursday 25th of March @11:59pm**

You are welcome to use additional tools (example Visual Paradigm) as long as you copy pictures of your work into this document. The pictures must be legible. Your professor will not grade any work that isn’t easy to read from the word document.

You are welcome to use outside sources in formulating your answers. Be sure to reference your work using APA format. ***Work not properly referenced will be passed to the Academic Integrity Committee for review.***

Please note that this test is divided into two parts: Sales and Scheduling. Please utilize the case study to answer the question in the Sales part of the test and your week 9 scheduling activity to answer the Scheduling part of the test.

**Part 1: Sales**

**Case Study**

*Ally Cares* began offering home services to their clients in 2003. Although *Ally Movers* started as a service business to support seniors, they now provide service to anyone who needs it. Services include house cleaning, running errands, lawn care, home day care, and pet walking.

Clients are invoiced monthly and clients are expected to pay upon receipt of their invoice.

Your team leader has written the following scenario to capture some of *Ally Cares’* requirements. Please remember that an ‘invoice’ is a ‘sale’ that hasn’t been paid for!

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case Name** | **Create Invoice** | | |
| Triggering Event | End of the month | | |
| Brief Description | Allows the Business Owner to create an invoice | | |
| Actors | Business Owner | | |
| Related Use Cases |  | | |
| Preconditions | Business Owner has opened the Main Menu. | | |
| Post Conditions | Invoice is saved to the database and now can be printed to deliver to the client | | |
| Flow of activities | Actor | | System |
|  |  | Requests to record an invoice | Displays a list of clients. Prompts for selection. |
|  |  | Selects a client. | Displays a list of services that were performed for the client during the date range. Calculates a unique invoice number for the invoice. Calculates the invoice date as the system date. Displays the Invoice. |
|  |  | Selects a service | Displays the cost/hour for that service and prompts for number of hours |
|  |  | Enters number of hours | Adds the invoice detail. Calculates the cost of the service as cost/hour \* number of hours. Calculates the HST. Displays the Invoice detail. Updates the Invoice total. Displays the invoice total. |
|  |  | Repeats above 2 steps until all details are created | Prompts to print or email. |
|  |  | Chooses to print | Saves the invoice and details. Prints the invoice. |
| Exception Conditions | * Business Owner chooses to cancel adding the invoice. | | |

**Question 1 (worth 5 marks)**

Create a class diagram that supports the scenario.

**Question 2 (worth 10 marks)**

Complete sequence diagrams to support the above scenario.

**Question 3 (worth 2 marks)**

The above scenario assumes that the cost/hour for a service is the same for each employee. What would happen if the cost/hour changed for each employee providing the service? How would you change your model? Please describe in English.

**Question 4 (worth 2 marks)**

*Ally Cares* is thinking of offering a 10% discount to their clients who recommend their services. How would you change your model to support this?

**Part 2: Scheduling**

You participated in a scheduling activity as part of week 9. Please use that activity as the case study for this part of the test.

**Question 5 – Class Diagram (worth 10 marks)**

Your task is to create a class diagram to support the activity and the scenario described below.

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case Name | Query Scheduled moves of a driver. | | |
| Triggering Event | Driver requests their schedule | | |
| Brief Description | Allows a Driver to request their scheduled moves for the week. The query must produce an online report displaying the drivers assigned moves, the truck that they are using, the movers assigned to the move, the start time and end time of the move, the directions and notes associated with the move. | | |
| Actors | Driver | | |
| Related Use Cases |  | | |
| Preconditions | Driver has opened the Employee Menu | | |
| Post Conditions | Online report is displayed to the driver. | | |
| Flow of activities | Actor | | System |
|  | 1. | Requests Schedule | Uses login information to retrieve a schedule for the driver for the week. |
| Exception Conditions | * Driver chooses to cancel retrieving their schedule | | |

**Question 6 – Sequence diagram (worth 5 marks)**

Please complete an object level sequence diagram to support the above scenario.