**College of Technological Innovation**

**SWE-320**

**Fall 2023**

**OOD Assignment**

Deadline: November 25 Section: 504

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A group of maximum three (03) students can work on this assignment together and make one final group report, each student needs to submit a copy of their group report. The assignment consists of 3 parts that need to be submitted as one report.

**Description:**

Trendy Gifts is a shop that sells various gift items. They want to promote their business by selling their products online. A part of the software requirement is given below. You are required to do additional self-study on how online shopping websites function and create a design for managing it.

**Requirements**: The items being sold in the shop are mainly of three types, Money Card, Dubai gifts, and Arabic Sweets. All relevant details of these items are stored in the system including a unique ID, item description, the price, and available quantity in the store. At any point in time, the system is able to generate reports to show the stock of the available items, the description of each item, and also the amount of sales per day for an item. Many people visit the website, but if an online purchase has to be made the visitor has to register with the website. This requires the person to give some personal details and also furnish an email-id, username and password. After a successful login, the online customer can populate a shopping-cart from the list of all available items in the online shop. Each customer also has an account which tracks the total amount to be paid for the selected items in the shopping-cart. Once the customer checks-out, a total-bill is issued for the customer’s order and the payment is accepted using a valid credit card. Details of successful transactions are maintained in the customer’s account.

You need to submit the following **Report Sections/Format**

1. Title Page: Include case-study title, student ID, and full name
2. Table of Content Page: Include sections’ heading with a respective page number
3. Class Definitions: Identify and list the classes with their related attributes and behaviors.
4. UML Class Design and relationships: The UML class diagram, with class relationships, and cardinality for the business case is provided. Develop a complete inheritance and association relationships in all the identified classes. A description of the UML class diagram explaining the relationships, the assumptions and the rationale.
5. Class Implementation: Provide all the required Python code to implement each class and its attributes and functions in the system. Develop code for all the classes identified in the class diagram. Create few objects and use their respective functions
6. Conclusion: In this section include a reflection on what was learned in this exercise, the challenges faced while working on this assignment, and how the system can be further expanded.

**NOTE**: Each member of the group is required to demonstrate the complete developed code for the new system. This will be in the last week around Nov 25-27th, 2023