B.Sc. in Computer Science and Engineering

School of Science and Technology

Bangladesh Open University

CSE22P5 Information System Analysis and Design Lab

Lab Report-III

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Table of Contents

Cover Page 1
Table of Contents 2
Experiment No 3
Date 3
Title 3
Objective 3
Theory 3
i. Class Diagram 3
ii. Product Catalog 3
iii. Order Processing 3
iv. Basic Components of Class Diagram 3
Required Tools and Software 4
i. Sketch Pen & Pad 4
ii. Wondershare EdrawMax 4
iii. MS Word 4
Execution 4
i. Sketching The Model Using Sketch Pen & Pad 4
ii. Drawing The Diagram Using Wondershare EdrawMax 4
iii. Formatting The Report Using MS Word 5
Output 5
References 6
i. Book 6
ii. URL 6

Experiment No: III.

Date: 22 Mar 24.

Title: Design a Complete Class Diagram of an Online Order Processing System.

Objective:

- Drawing a Class Diagram for an Online Order Processing System.
- Clarify system structure, interactions, and functionality.
- Analyze essential components like customer management and inventory.
- Enhance understanding of system architecture and operation.

Theory: The terminologies relevant to Class Diagram are –

i. **Class Diagram**:- A use case diagram is a visual representation that illustrates how users interact with a system and the various functionalities the system provides.

ii. **Product Catalog**:- Customer Management in the Online Order Processing System handles registration, authentication, and profile management, ensuring a seamless experience for users.

iii. **Order Processing**:- Order Processing handles the sequence of steps from order placement to fulfillment in the Online Order Processing System. It validates orders, processes payments securely, and manages shipping logistics. This module ensures accurate and timely delivery to customers, optimizing the efficiency of the e-commerce platform.

iv. **Basic Components of Class Diagram**:- In the study of Class Diagrams, key terms like Classes, Attributes, Methods, Associations, Multiplicity,

Inheritance, Aggregation, Composition and Dependency play crucial roles. They define the structure, relationships and behaviors within the system, offering insights into its architecture and functionality.

Required Tools and Software:

- Sketch Pen & Pad (for sketching the model)
- Wondershare EdrawMax (for designing the diagram)
- MS Word (for writing and furnishing)

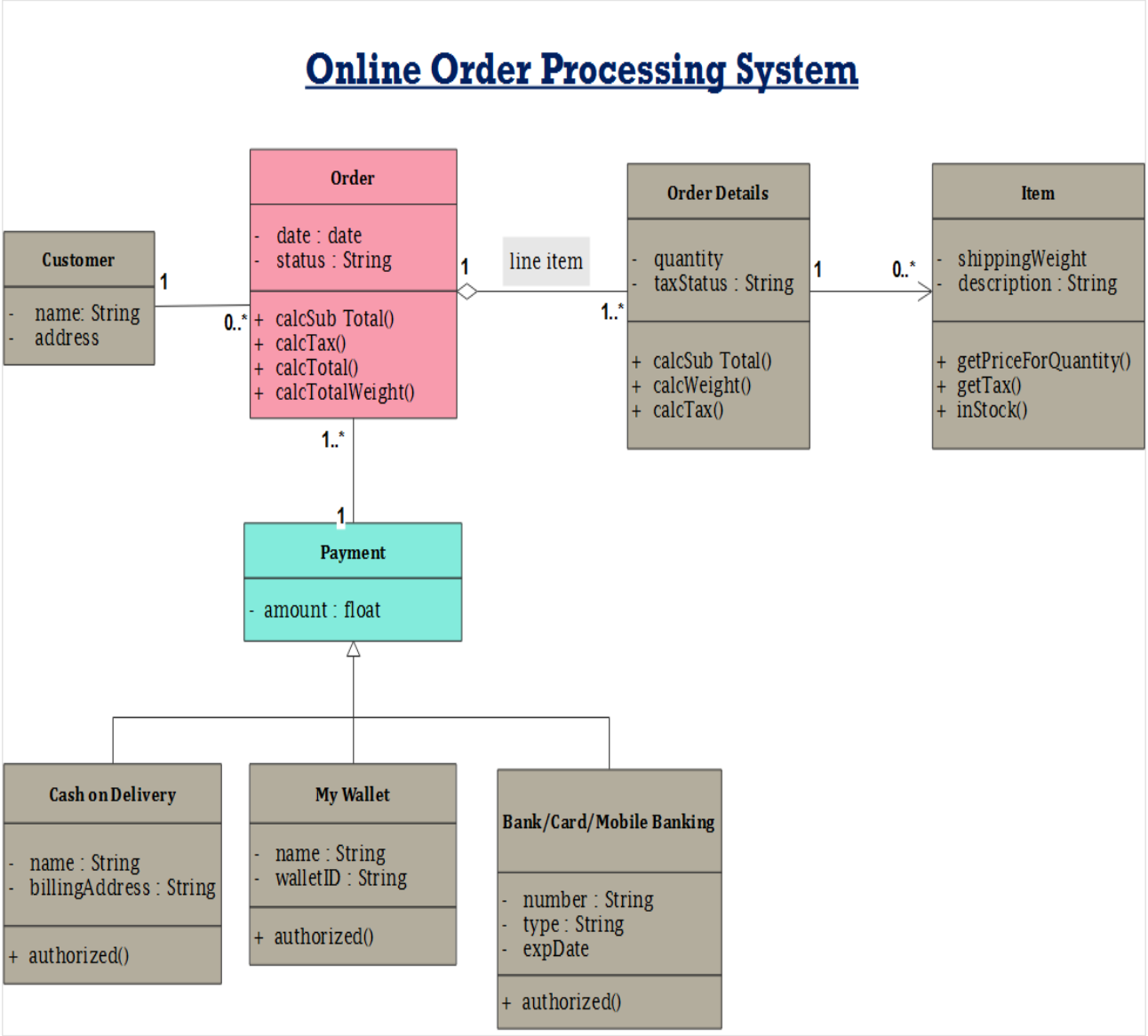
Execution:

- Sketching The Model Using Sketch Pen & Pad
  - Gather necessary information and understand system requirements.
  - Identify primary components.
  - Draw classes.
  - Add necessary attributes.
  - Draw associations and multiplicities.
  - Carry out review and refinements.
- Drawing the diagram using Wondershare EdrawMax
  - Launch Wondershare EdrawMax and create a new blank class diagram.
  - Add classes and write appropriate labels for those.
  - Add attributes for the classes.
  - Draw associations between classes to represent relationships.
  - Specify multiplicities next to associations.
  - Finalize after required review and refinement.

- Formatting the Report using MS Word

  - Open MS Word and create a new document.
  - Set up layout and formatting preferences.
  - Type content for each section.
  - Organize content with appropriate headings and subheadings.
  - Insert the diagram from Wondershare EdrawMax.
  - Review the entire document for coherence and professionalism.

Output:



References:

- Book

  Schmuller, Joseph, ***SAMS Teach Yourself UML in 24 Hours*** (3rd ed.), SAMS

- URL
  - Edraw Max User Manual Professional and All-in-one Diagramming Software https://www.edrawsoft.com/guide/edraw-max-user-manual-en.pdf
  - Edraw Max User Guide https://images.edrawsoft.com/guide/edrawmax/edrawmax-user-manual-en.pdf

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