

**COLLEGE OF COMPUTING AND ENGINEERING** **(CCE)**



**CCS108 – Object-Oriented Programming**

**Laboratory Exercise No. 8**

***Class Diagram using the UML***

Submitted by:

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[Name]

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| **2CS-B** |

[Section]

Submitted to:

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| **Prof. Terrence A. Lim** |

[Name of Instructor/Professor]

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**GRADE**

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| 10/30/22 |

[Date]



***Laboratory Exercise No. 8***

**Class Diagram using the UML**



**I. OBJECTIVES**

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| **At the end of the exercise, the students are expected to:**   * **Create a user-defined class diagram.** * **Apply attributes and operations in a class diagram.** * **Interpret and translate a class diagram into a useful code.** |

**II. EQUIPMENT/MATERIALS**

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| **The following equipment or materials will be needed to perform the laboratory exercise:**   * **PC with Java Compiler and IDE (Eclipse, NetBeans, jGrasp, etc.)** * **Internet Connection for Online Java Compiler/Editor and Submission** * **USB for backup and file storage** |

**III. PROCEDURE/DISCUSSION**

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| Laboratory Work No. 1 Construct a class named Investment for a company reserve system. The class must contain:  • Data fields of **name**, **symbol**, **curPrice**, and **prevClosingPrice**.  • A method with a name **getChangePercent()** that returns by how much percent the change  of the price of the item has been lowered.  • Methods with a name **setName()**, **setSymbol()**, **setCurPrice()**, and  **setPrevClosingPrice()** that set the new values for the variables.  • Methods with a name **getCurPrice()** and **getPrevClosingPrice()** that return the previous  closing price, and the current price variables. |

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| Sample Run:Enter the investment symbol: PEnter the firm name: XYZ CompanyEnter the previous closing price: 150.0Enter the current price: 120.0Previous closing price: 150.0Closing price: 120.0Price Change: -20.0 % Draw or illustrate the corresponding UML diagram for the said program and then implement the class. The program must prompts the user to enter the variables **name**, **symbol**, **curPrice**, and **prevClosingPrice**. It will display the current price and percentage in which it has been changed by.  Lastly, save the entire application with a name or folder CCS108LE8 with a package as pnc.laboratory.exercise8. |

**IV. DATA REPRESENTATION / OUTPUT PICTURES**

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| **Codiva link**: <https://www.codiva.io/p/d8f8567b-310a-44e0-a643-bf09b608d172> |

**V. RESULTS INTERPRETATION/OBSERVATION**

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| the result of the laboratory exercise 8 is a investment reserve system that computes the current price and previous closing price. And it will get the price change percentage. In the code a simple application about a company displaying the user inputs investment symbol, company firm name, and closing price. It shows a simulation from which the company is selling it's own. In the uml diagram the class is first shown as it is the first thing that is placed their. In the second layer, the attributes or the variables are presented in a manner from which they are used by the code. The third and last layer contains the methods from which it is ordered from where the code used the first method which is the +getChangedPercent():double to the last method which is getPrevClosing():double. |

**VI. CONCLUSIONS**

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| In this laboratory exercise, I learned about how to write a class, class fields, getters and setters. And also, I learned about how to write and use a uml diagram. Uml diagrams is It symbolizes an application's static view. Not only is a class diagram useful for both for creating executable code of a system and for visualizing, describing, and documenting many elements of the software Program.  in this exercise I learned about the how to translate a code into a uml. and translate a uml diagram into a code. I learned that the purpose of the uml diagram is to summarize and use it as a representation of code for non tech person. Uml diagram usually used in a object oriented programming.in laboratory exercise we used capsulation and getters and setters in the code, which is it is a public or private access modifier. In uml diagram each access modifier has a different representation, for example is your access modifier is public, you can use a + sign, while if your access modifier is private, you can use a – sign. |

**VII. STUDENT OUTCOMES ADDRESSED**

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| ***(… to fill out by your instructor)*** |

**VIII. APPENDICES**

1. **RUBRICS AND SCORING**

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| ***(… kindly refer to rubrics and scoring provided)*** |