School Computing, Faculty of Engineering

Universiti Teknologi Malaysia

SCSJ1023 Programming Technique II

Semester 2, 2022/2023

Individual Report for the Group Project

Notes: This report is to be submitted individually.

Student's Name	Tang Yan Qing
Group Project Title	Banking System

A. Implementation of Classes

Describe the class (or classes) you implemented for the project. Give the estimate percentage of how much you did on the class. For example, if you did all the code for the class, then you write 100%. Also, give the location of the code you did.

Class Name	Percentage of contribution	Location		Remarks
		File	**Line Numbers**	
Account	99%	Uwuuu_PT2_Project.cpp	29 - 44, 50 - 108	The Account class is the generic class to hold the information such as type of account, balance, number of deposits monthly, number of withdrawals monthly and annual interest rate about a bank account. It also consists of an object of the ServiceCharges class.

B. Implementation of OOP Concepts

Describe the concept (or concepts) you implemented for the project. Give the estimate percentage of how much you did on the concept. Explain why the concept is needed in your project, and explain the general idea of how you implemented it.

*The concepts to be described here include **Association, Inheritance and Polymorphism**. Note that, each member of a group is not necessarily to implement all the concepts.*

OOP Concept	Percentage of contribution	Location		Why is this concept needed?	General idea of the implementation
		File	Line Num.		
Composition	100%	Uwuuu_PT2_Project.cpp	36	Composition forms a "whole-part" relationship between Account class and ServiceCharges class which is a dependent relationship in brief. It helps in encapsulating the behavior of servicecharges variable inside the Account class while maintaining a clean separation of concerns.	The Account class consists of an object of the ServiceCharges class as its member variables. It allows an Account class's members to access the methods of ServiceCharges class to manage service charges associated with the accounts.
Polymorphism	33.33%	Uwuuu_PT2_Project.cpp	50 - 52, 60 - 65	Polymorphism allows different account types to have their own specific implementation of certain function like withdraw and monthlyproc, while still being able to use a common interface provided by the Account class.	The base class, Account class has a withdraw method and a monthlyproc method which declared as virtual functions and allowing the derived classes of Account class which are SavingsAccount class and CheckingAccount class to override it. It allows us to perform a single action in different ways.

C. Other Implementations (Optional)

This part is only to be filled in should you have other things you did for your project but have not been mentioned in Part A and B.

Things / Code Done	Percentage of contribution	Remarks
Main function	100%	An array of Account class object, a SavingsAccount class object and a CheckingAccount class object have been created. Data about customers is read from "Customer.txt" and write to the "Customer.txt" again after performing user-selected operations on the account.