

ASSIGNMENTS

Object-Oriented Programming with C++ (CSE 3943)



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Major Assignment

1. Assume that a bank maintains kinds of accounts for customers, one called as savings account and the other as current account. The savings account provides compound interest and withdrawal facilities, but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. Create a class account that stores customer name, account number and type of account. From this, derive the classes cur_acct and sav_acct to make them more specific to their requirements. Include necessary member functions in order to achieve the following tasks:

- (a) Accept deposit from a customer and update the balance.
- (b) Display the balance.
- (c) Compute and deposit interest.
- (d) Permit withdrawal and update the balance.
- (e) Check for the minimum balance, impose penalty, necessary, and update the balance.

Use constructors to initialize the class members for all the three classes.

2. Consider a class network of the following figure. The class master derives information from both account and admin classes which in turn derives information from the class person. Define all the four classes and write a program to create, update and display the information contained in master objects.

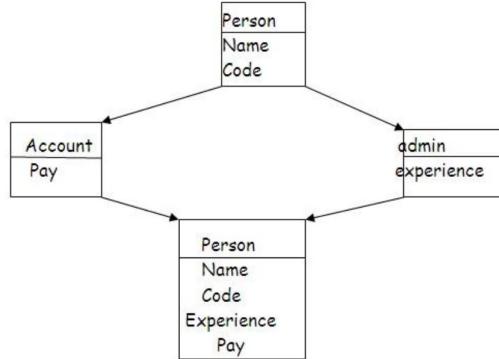


Figure 1: Multipath Inheritance

3. Consider a shopping list of items for which a user can place an order with a dealer every month. The list includes details such as code_number and price of each item. Different Operations which can be performed are:

- 1. Adding an item to the list
- 2. Deleting an item from the list
- 3. Printing the total value of the order.
- 4. Display all items on the list.

Write a C++ program using class and objects depicting above scenario. Here, arrays are used as member variables in the class.