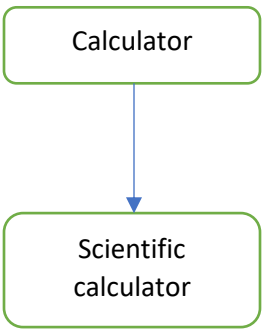
Object Oriented Programming

Lab Manual

Faculty of Information Technology

UCP Lahore Pakistan

Task 1:



Create a base class calculator and one additional class (derived from Calculator) called Scientific-Calculator

Calculator

- add()
- sub()
- multiply()
- divide()

Scientific-Calculator

- Squar()
- Power()

In main function you should do the following

```
int main
        {
        Calculator c;
        c.add();
        c.sub();
        ScCalculator ob;
        ob.add();
        ob.sub();
        ob.sq();
        ob.power();
        return 0;}
```

Task 2:

You have a class Person which has the following attributes as its private member variables.

• name (char*)

• age (int)

Write a parameterized constructor to initialize the values. You have an Employee class which is publicly inherited from the Person class. It has the following attributes:

• salary (double)

• employeeId (int)

You have another class BaseballPlayer publically inherited from the Person class. BaseballPlayer has the following attributes:

• battingAverage (double)

• totalRuns (int)

Make an object of BaseballPlayer class in main and initialize values of name, age,battingAverage and totalRuns Now, make an Employee class object in main and initialize values of name, age, employeeId and salary. Count the total number of Employees and Baseball players and display the count

Task 3:

Create a base class, called BankAccount, and two additional classes (each derived from BankAccount), called SavingsAccount and CheckingAccount.

BankAccount:

- Title
- AccountNumber
- Balance
- Deposit()
- Withdraw()

SavingAccount:

- InterestRate
- CalculateInterest()

CheckingAccount:

- fee charged per transaction

Class CheckingAccount should redefine member functions withdraw and deposit so that they subtract the fee from the account balance whenever either transaction is performed successfully.
You will then test the operations of each class in function main() to simulate the transactions of both a checking account and a savings account.