

### Assignment No 3

**Qno.1** Define a class for bank account that includes the following data members:

- a) Name of the depositor
- b) Account Number
- c) Type of account
- d) Balance amount in the account

The class also contains the following member functions:

- a) A constructor to assign initial values
- b) Deposit function to deposit some amount. It should accept the amount as parameter
- c) Withdraw function to withdraw an amount after checking the balance. It should accept the amount as parameter.
- d) Display function to display name and balance

**Qno.2** Create a class that imitates part of the functionality of the basic data type int. Call the class Int (note different capitalization). The only data in this class is an int variable.

Include member functions to initialize an Int to 0, to initialize it to an int value, to display it (it looks just like an int), and to add two Int values.

Write a program that exercises this class by creating one uninitialized and two initialized `Int` values, adding the two initialized values and placing the response in the uninitialized value, and then displaying this result.

**Qno.3** Imagine a tollbooth at a bridge. Cars passing by the booth are expected to pay a 50 cent toll. Mostly they do, but sometimes a car goes by without paying.

The tollbooth keeps track of the number of cars that have gone by, and of the total amount of money collected.

Model this tollbooth with a class called `tollBooth`. The two data items are a type

`unsigned int` to hold the total number of cars, and a type `double` to hold the total amount of money collected. A constructor initializes both of these to 0. A member function called `payingCar()` increments the car total and adds 0.50 to the cash total. Another function, called `nopayCar()`, increments the car total but adds nothing to the cash total. Finally, a member function called `display()` displays the two totals. Make appropriate member functions `const`.

Include a program to test this class. This program should allow the user to push one key to count a paying car, and another to count a nonpaying car. Pushing the `Esc` key should cause the program to print out the total cars and total cash and then exit.

**Qno.4** Create a class called `time` that has separate `int` member data for hours, minutes, and seconds. One constructor should initialize this data to 0, and another should initialize it to fixed values. Another member function should display it, in `11:59:59` format. The final member function should add two objects of type `time` passed as arguments.

A `main ()` program should create two initialized `time` objects (should they be `const`?) and one that isn't initialized. Then it should add the two initialized values together, leaving the result in the third `time` variable. Finally, it should display the value of this third variable. Make appropriate member functions `const`.

**Note:**

**Two questions for class Assignment and two for lab Assignment. Create spread file for each, class Assignment and lab Assignment.**

*sultan*