

**CPP Assignment 1**

- 1) Write a menu driven program for Date in a C language.  
Declare a structure Date having data members day, month, year. Implement the following functions.

```
void InitDate(struct Date* ptDate);  
void PrintDateOnConsole(struct Date* ptDate);  
void AcceptDateFromConsole(struct Date* ptDate);
```

- 2) Write a menu driven program for Date in a C++ language.  
Declare a structure Date having data members day, month, year. Implement the following member functions.

```
void InitDate();  
void PrintDateOnConsole();  
void AcceptDateFromConsole();  
bool IsLeapYear();
```

- 3) Write a menu driven program for Date in a C++ language.  
Declare a class Date having data members day, month, year. Implement the following member functions.

```
Date();  
Date(int day, int month, int year);  
void PrintDateOnConsole();  
void AcceptDateFromConsole();  
bool IsLeapYear();
```

- 4) Write a menu driven program to calculate volume of the box. Provide necessary constructors.

- 5) Imagine a tollbooth at a bridge. Cars passing by the booth are expected to pay a fifty-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 all data members 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 PrintOnConsole( ) displays the two totals and number of paying as well as non paying cars total.