Lab VI

Working with class

Question 1

Toll Booth Program

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 paying Car () increments the car total and adds 0.50 to the cash total.

• Another function, called nonpayCar(), 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 [Escape] key should cause the program to print out the total cars and total cash and then exit.

Question 2

String handling Problem

Create a C-String class “Stringrev” to reverse a string. The class has a data member of type C-String and a member function called reversit() that reverses a C-string (an array of char). Use for loop that swaps the first and last characters, then the second and next-to-last characters, and so on. Write a program to exercise reversit(). The program should get a string from the user and create a object with the given string. Use an input method that allows embedded blanks.