

Assignment 3

Q1. Write a menu driven program to calculate volume of the box($\text{length} * \text{width} * \text{height}$). Provide necessary constructors.

Q2. 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. An other 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. (write a menu driven code for it)

Q3. Write a class to find volume of a Cylinder by using following members. (volume of Cylinder= $3.14 * \text{radius} * \text{radius} * \text{height}$) **(write a menu driven code for it and also use modular approach)**

Class having following member functions:

Cylinder()

Cylinder(double radius, double height)

getRadius()

setRadius()

getHeight()

setHeight()

getVolume()

printVolume()

Initialize members using constructor member initializer list.