1. Write a program that accepts two numbers and a operator like (+,-,\*, /) as command line arguments and perform the appropriate operation indicated by operator.

If the user enters any other character the appropriate message will be displayed. The output of the program should be displayed to the user.

1. Create a class Car which contains members speed, noOfGear. The class has a method drive() which is responsible to provide starting speed and noOfGears to a Car. Implement display() method which will display all attributes of Car class.

The class SportCar is derived from the class Car which adds new features AirBallonType. When this method is invoked, initial speed and gear status must be displayed on console. Override the display method which display all attribute of the SportCar. Make use of super class display() method.

1. Create a package psl.itp.hyd<your batch id>.cs/ncs<your emp id>.<your first name>.

For e.g., psl.itp.hyd10001.cs35123.Anu

Now create a Greeter class in this package having the following features:

Attributes:

name string //indicates name of the person to be greeted

Member functions:

Greeter(aName) //constructor to initialize the name of the //person to be greeted by this greeter.

sayHello() //returns a hello message with the name of the //person initialized earlier.

sayGoodBye() //bids goodbye to the person named earlier.

Create another class in the same package called Advisor that has the following features:

Attributes:

message string[5] //contains five advice messages

Member functions:

Advisor() //default constructor to initialize an array of //strings with atleast five advice messages

getAdvice() //randomly selects an advice from the available //list of messages and returns it to the caller of //this method

Outside the package, from your working directory, create a class GreeterTest that constructs Greeter objects for all command-line arguments and prints out the results of calling sayHello().

The program should then display an advice and finally bid goodbye to each of the persons/entities in reverse order of the names entered at the command line.

For e.g.,

java GreeterTest Mars Venus

then the program should print

Hello, Mars!

Hello, Venus!

Advice: Never say No

Goodbye Venus!

Goodbye Mars!

1. Create a package esg.itp.shape containing the following classes and interfaces.

An interface Polygon containing the members as given below:

area float

perimeter float

void calcArea( ); abstract method to calculate area of a particular polygon given its dimensions

void calcPeri( ); abstract method to calculate perimeter of a particular polygon given its dimensions

void display( ); method to display the area and perimeter

of the given polygon

Create a class Square that implements Polygon and has the following member:

side float

Square(float s); constructor to initialize side of square

Create another class Rectangle that implements Polygon and has the following member:

length float

breadth float

Rectangle(int len, int bre); constructor to initialize length and breadth of a rectangle

Outside the package, create a class that imports the above package an instantiates an object of the Square class and an object of the Rectangle class.

Call the above methods on each of the classes to calculate the area and perimeter given the side and the length/breadth of the Square class and the Rectangle class respectively.

1. **Accept numbers from command line arguments. Store all numbers in an array and find out the average of numbers those are at the index which is prime number.**