**Assignment 4**

**Problem 1 – Inheritance**

Create a base class Vehicle that has:

* Brand (string)
* Speed (int)
* A method DisplayInfo() that prints the brand and speed.

Create a derived class Car tha t adds:

* NumberOfDoors (int)
* Override DisplayInfo() to also print the number of doors.

In the Main method, create an object of Car and display all details.

**Problem 2 – Multiple Inheritance (using Interface)**

Create an interface IPrintable that has:

* void PrintDetails() method.

Create a class Book that has:

* Title (string)
* Author (string)
* Implements IPrintable to print its details.

Create another interface IBorrowable that has:

* void Borrow() method.

Make Book implement both interfaces so it supports **multiple inheritance** behavior.  
In Main, create an object of Book and call both methods.

**Problem 3 – Method Overloading**

Create a class Calculator that has a method Add:

* Add(int a, int b) returns the sum of two integers.
* Add(double a, double b) returns the sum of two doubles.
* Add(int a, int b, int c) returns the sum of three integers.

In Main, call all versions of the method and print the results.

**Problem 4 – Method Override**

Create a base class Shape with:

* A method Draw() that prints "Drawing a Shape".

Create a derived class Circle that **overrides** the Draw() method to print "Drawing a Circle".

In Main, create a Shape reference that points to a Circle object and call Draw() to show **runtime polymorphism**.