Question 03

namespace ConsoleApp

{

public class CalculateValues

{

public double Addition(double num1, double num2)

{

return num1 + num2;

}

public double Subtraction(double num1, double num2)

{

return num1 - num2;

}

public double Multiplication(double num1, double num2)

{

return num1 \* num2;

}

public double Division(double num1, double num2)

{

if (num2 == 0)

{

throw new DivideByZeroException("Cannot divide by zero.");

}

return num1 / num2;

}

}

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter 1 for addition");

Console.WriteLine("Enter 2 for subtraction");

Console.WriteLine("Enter 3 for multiplication");

Console.WriteLine("Enter 4 for division");

Console.WriteLine();

Console.Write("Enter your choice: ");

int choice = Convert.ToInt32(Console.ReadLine());

Console.Write("Enter number 1: ");

double num1 = Convert.ToDouble(Console.ReadLine());

Console.Write("Enter number 2: ");

double num2 = Convert.ToDouble(Console.ReadLine());

CalculateValues calculator = new CalculateValues();

double result = 0;

switch (choice)

{

case 1:

result = calculator.Addition(num1, num2);

break;

case 2:

result = calculator.Subtraction(num1, num2);

break;

case 3:

result = calculator.Multiplication(num1, num2);

break;

case 4:

result = calculator.Division(num1, num2);

break;

default:

Console.WriteLine("Invalid choice.");

break;

}

Console.WriteLine("Your answer is: " + result);

Console.ReadKey();

}

}

}

Question 04

1.Create a new class file named HelloClass.cs:

using System;

public class HelloClass

{

private void sayHello()

{

Console.WriteLine("Hello, World!");

}

}

2. In the Program.cs (main class) file:

using System;

class Program

{

static void Main(string[] args)

{

HelloClass helloObject = new HelloClass();

helloObject.sayHello(); // This line will cause a compile-time error

}

}

When you try to compile the code above, you'll encounter a compile-time error, and the reason is that the sayHello() method is declared as private. Since it is private, it can only be accessed from within the same HelloClass where it is defined. Attempting to access it from the Program class (main class) will result in a compilation error.

Question 05

using System;

class ArrayProcessor

{

public void ProcessArray(int[] array)

{

int min = array[0];

int max = array[0];

int sum = 0;

for (int i = 0; i < array.Length; i++)

{

if (array[i] < min)

min = array[i];

if (array[i] > max)

max = array[i];

sum += array[i];

}

double average = (double)sum / array.Length;

Console.WriteLine($"Minimum value: {min}");

Console.WriteLine($"Maximum value: {max}");

Console.WriteLine($"Average value: {average}");

Console.Write("Reverse order of values: ");

for (int i = array.Length - 1; i >= 0; i--)

{

Console.Write(array[i] + " ");

}

Console.WriteLine();

}

}

class Program

{

static void Main(string[] args)

{

int[] array = new int[10];

Console.WriteLine("Enter 10 values for the array:");

for (int i = 0; i < array.Length; i++)

{

Console.Write($"Value {i + 1}: ");

array[i] = int.Parse(Console.ReadLine());

}

ArrayProcessor arrayProcessor = new ArrayProcessor();

arrayProcessor.ProcessArray(array);

}

}