1. CSharp Programming Assignment

**Program.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace \_1\_CSharpIntroProg

{

internal class Program

{

public struct Books

{

public int bookId;

public string title;

public double price;

public BookType bookType;

}

public enum BookType

{

Magazine,

Novel,

ReferenceBook,

Miscellaneous

}

static void Main(string[] args)

{

Calculator();

highestMarks();

int[] arr = { 1, 2, 3, 4, 5};

arraySum(arr);

swapIntegers(10, 5);

Circle(5);

acceptBookDetails();

Console.ReadKey();

}

public static void Calculator()

{

int a, b;

Console.WriteLine("Enter the first number");

a = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Enter the second number");

b = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Summation of two numbers : " + (a + b));

Console.WriteLine("Subtraction of two numbers : " + (a - b));

Console.WriteLine("Multiplication of two numbers : " + (a \* b));

Console.WriteLine("Division of two numbers : " + (a / b));

}

public static void highestMarks()

{

int[] marks = new int[5];

int temp=0;

Console.WriteLine("Enter the marks of the 5 students");

for(int i = 0; i < 5; i++)

{

marks[i] = Convert.ToInt32(Console.ReadLine());

}

for(int i = 0; i < 5; i++)

{

if (marks[i] > temp)

temp = marks[i];

}

Console.WriteLine("Highest marks obtained a student is : "+temp);

}

public static void arraySum(int[] arr)

{

int sum = 0;

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

{

sum = sum + arr[i];

}

Console.WriteLine("Summation of all the elements in the array is : "+sum);

}

public static void swapIntegers(int a,int b)

{

Console.WriteLine("Numbers after swapping a : {0} b : {1}", a, b);

a = a + b;

b = a - b;

a = a - b;

Console.WriteLine("Numbers before swapping a : {0} b : {1}", a, b);

}

public static void Circle(double r)

{

double area = Math.PI \* Math.Pow(r,2);

double circum = 2 \* Math.PI \* r;

Console.WriteLine("Area of the circle is {0}",area);

Console.WriteLine("Circimference of the circle is {0}",circum);

}

public static void acceptBookDetails()

{

int id, n; string title; double price;

Console.WriteLine("Enter the details of the book");

Console.WriteLine("Enter the book id");

id = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Enter the title of the book");

title = Console.ReadLine();

Console.WriteLine("Enter the price of the book");

price = Convert.ToDouble(Console.ReadLine());

Console.WriteLine("Enter the type of the book \n 1. Magazine \n 2. Novel \n 3. Reference Book \n 4. Miscellaneous");

n= Convert.ToInt32(Console.ReadLine());

Books book = new Books();

book.bookId = id;

book.title = title;

book.price = price;

book.bookType = (BookType)n-1;

displayBookDetais(book.bookId, book.title, book.price, book.bookType);

}

public static void displayBookDetais(int id,string title,double price,BookType type)

{

Console.WriteLine("Book Details : ");

Console.WriteLine("Book Id :" +id);

Console.WriteLine("Book Title :" + title);

Console.WriteLine("Book Price :" + price);

Console.WriteLine("Book Book Type :" + type);

}

}

}