1.Develop a C# program to simulate simple arithmetic calculator for Addition, Subtraction, Multiplication,

Division and Mod operations. Read the operator and operands through console.

using System;

namespace Sample {

class Demo {

static void Main(string[] args) {

int num1 = 50;

int num2 = 25;

int result;

result = num1 + num2;

Console.WriteLine("Value is {0}", result);

result = num1 - num2;

Console.WriteLine("Value is {0}", result);

result = num1 \* num2;

Console.WriteLine("Value is {0}", result);

result = num1 / num2;

Console.WriteLine("Value is {0}", result);

result = num1 % num2;

Console.WriteLine("Value is {0}", result);

Console.ReadLine();

}

}

}

Output :-

Value is 75

Value is 25

Value is 1250

Value is 2

Value is 0

2. Develop a C# program to print Armstrong Number between 1 to 1000.

using System;

using System.Collections.Generic;

using System.Linq;

public class Program

{

public static void Main()

{

int mynum,val,res,temp\_var;

int start\_no,end\_no;

Console.Write("\n\n");

Console.Write("Searching for the Armstrong number in a given range of range of numbers:\n");

Console.Write("--------------------------------------------------------");

Console.Write("\n\n");

Console.Write("Enter the starting number... ");

start\_no= Convert.ToInt32(Console.ReadLine());

Console.Write("Enter the ending number... ");

end\_no= Convert.ToInt32(Console.ReadLine());

Console.Write("The list of Armstrong numbers in given above range are: ");

for(mynum=start\_no;mynum<=end\_no;mynum++){

temp\_var=mynum;

res = 0;

while(temp\_var!=0){

val=temp\_var % 10;

temp\_var=temp\_var/10;

res=res+(val\*val\*val);

}

if(res==mynum)

Console.Write("{0} ",mynum);

}

Console.Write("\n");

}

}

Output :-

Enter the starting number... 1

Enter the ending number... 1000

The list of Armstrong numbers in given above range are:

1

153

370

371

407

3. Develop a C# program to list all substrings in a given string. [ Hint: use of Substring() method]

using System;

class Program

{

static void Main()

{

Console.WriteLine("Enter a string:");

string input = Console.ReadLine();

Console.WriteLine("All substrings in the given string are:");

ListSubstrings(input);

Console.ReadLine(); // Keep the console window open

}

static void ListSubstrings(string str)

{

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

{

for (int j = 1; j <= str.Length - i; j++)

{

string substring = str.Substring(i, j);

Console.WriteLine(substring);

}

}

}

}

Output :-

Enter a string:

abcd

All substrings in the given string are:a

ab

abc

abcd

b

bc

bcd

c

cd

d