using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project201

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : To read a number and print factors of it

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

string name = "pritam";

string work = "trainee";

Console.WriteLine("I am {0} and I am {1} in capgemini",name,work);

Console.WriteLine("I am "+name+" and I am "+work+" in capgemini");

int input,i;

Console.WriteLine("Enter any number:");

input = int.Parse(Console.ReadLine());

Console.WriteLine("Factors of {0} are below:\n",input);

for(i=1;i<=input;i++)

{

if(input % i == 0)

Console.WriteLine(i);

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project202

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Quiz competition

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int score = 0, ans;

string name;

Console.WriteLine("Enter Your Name:");

name = Console.ReadLine();

Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

Console.WriteLine("Hi {0} Welcome to quiz of capgemini",name);

Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

Console.WriteLine("Q1.Capital of westbengal");

Console.WriteLine("1.Kolkata 2.Mumbai 3.Pune 4.Chennai");

Console.WriteLine("Enter your choice");

ans = int.Parse(Console.ReadLine());

if (ans == 1)

score += 20;

Console.WriteLine("Q2.Capital of Chennai");

Console.WriteLine("1.Kolkata 2.Mumbai 3.Pune 4.Tamilnadu");

Console.WriteLine("Enter your choice");

ans = int.Parse(Console.ReadLine());

if (ans == 4)

score += 20;

Console.WriteLine("Q3.Capital of Rajasthan");

Console.WriteLine("1.Kolkata 2.Mumbai 3.Joypur 4.Tamilnadu");

Console.WriteLine("Enter your choice");

ans = int.Parse(Console.ReadLine());

if (ans == 3)

score += 20;

Console.WriteLine("Q4.Capital of India");

Console.WriteLine("1.Kolkata 2.Delhi 3.Joypur 4.Tamilnadu");

Console.WriteLine("Enter your choice");

ans = int.Parse(Console.ReadLine());

if (ans == 2)

score += 20;

if(score>=60)

Console.WriteLine("Congrats {0} you {1} in quiz",name,score);

else

Console.WriteLine("Sorry! {0} you got only {1} in quiz", name, score);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project203

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Read name and age from user and print it

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

string name;

int age;

Console.WriteLine("Enter your name:");

name = Console.ReadLine();

Console.WriteLine("Enter age:");

age = int.Parse(Console.ReadLine());

Console.WriteLine("Hi {0} your age is {1}",name,age);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project204

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : value type/reference type/boxing/unboxing

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

/\*object p = 10;

p = "abc";

p = 9.5f;

p = true;

Console.WriteLine(p);

Console.ReadLine();

\*/

/\* int a = 5;

int b = 5;

if(a==b)

Console.WriteLine("Equal");

else

Console.WriteLine(" not Equal");

Console.ReadLine();

\*/

/\*object p = 10;

object q = p;

if (p == q)

Console.WriteLine("Equal");

else

Console.WriteLine(" not Equal");

Console.ReadLine();

\*/

/\* object p = 5;

object q = p;

q = 10;

Console.WriteLine(p);

Console.WriteLine(q);

Console.ReadLine();

\*/

int a = 5;

object q = 10;//boxing

object q = 10;

int r = (int)q; //unboxing

} } }

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project205

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : program to illustrate to null values

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int? age =null;

if(age.HasValue)

Console.WriteLine(age.Value);

else

Console.WriteLine("Age not Available");

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project206

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : brakpoint f10

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int i;

for(i=1;i<=5;i++)

Console.WriteLine("Hello");

Console.WriteLine("Hello");

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project207

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Read two number from user and get sum and avg

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

double a, b,sum,avg;

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

a = double.Parse(Console.ReadLine());

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

b = double.Parse(Console.ReadLine());

sum = a + b;

avg = (a + b) / 2;

Console.WriteLine("The sum is {0} and avg is {1}",sum,avg);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project208

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Prime and Not Prime

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int input,i,count=0;

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

input = int.Parse(Console.ReadLine());

for(i=1;i<=input;i++)

{

if (input % i == 0)

count++;

}

if(count==2)

Console.WriteLine("{0} is prime",input);

else

Console.WriteLine("{0} is not prime",input);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project209

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : GCD

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int a, b,i,gcd=1;

Console.WriteLine("Enter the First Number:");

a = int.Parse(Console.ReadLine());

Console.WriteLine("Enter the Second Number:");

b = int.Parse(Console.ReadLine());

for(i=1;i<=a&&i<=b;i++)

{

if (a % i == 0 && b % i == 0)

gcd = i;

}

Console.WriteLine("The GCD is{0}",gcd);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Pritam210

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Using Array read 5 numbers and find sum and avg

/// Date : 10-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int[] marks = new int[5];

int sum = 0, avg, i;

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

{

Console.WriteLine("Enter number");

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

sum += marks[i];

}

avg = sum / 5;

Console.WriteLine("sum={0} avg={1}",sum,avg);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project301

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Array length and initialize the single dimentional array

/// Date : 11-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int[] marks = new int[] { 1, 2, 3, 4, 5, 6 };

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

{

Console.WriteLine("marks[{0}] = {1}",i,marks[i]);

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project302

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Print 2D Array

/// Date : 11-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int[,] data = new int[,] { { 5, 4, 1 },{ 8, 9, 2 },{ 6, 7, 3 } };

for (int i = 0; i < 3; i++)

{

for (int j = 0; j < 3; j++)

{

Console.WriteLine("data[{0},{1}]={2}", i, j, data[i, j]);

}

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project303

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Print 2D Array diagonal sum(trace matrix)

/// Date : 11-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int[,] data = new int[,] { { 5, 4, 1 }, { 8, 9, 2 }, { 6, 7, 3 } };

int sum = 0;

for (int i = 0; i < 3; i++)

{

for (int j = 0; j < 3; j++)

{

if (i == j) //if I delete this this will sum of all matrix

sum += data[i, j];

}

}

Console.WriteLine("the matrix is {0}",sum);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project304

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Jagged Array

/// Date : 11-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

//normal 1d array

//int[] data = new int[5];

//normal 2d array

//int[,] data = new int[3, 2];

//jagged array c# 2 rows

char[][] names = new char[4][];

names[0] = new char[] { 'r', 'a', 'j' };

names[1] = new char[] { 'k', 'i', 'r', 'a', 'n' };

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project305

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Employee cLass

/// Date : 11-Sep-2018

/// </summary>

class Employee

{

public int id;

public string name;

public int salary;

/// <summary>

/// This method is used to read employee data from user

/// </summary>

public void ReadData()

{

Console.WriteLine("Enter Id:");

id = int.Parse(Console.ReadLine());

Console.WriteLine("Enter Name:");

name = Console.ReadLine();

Console.WriteLine("Enter Salary:");

salary = int.Parse(Console.ReadLine());

}

/// <summary>

/// method will print data

/// </summary>

public void PrintData()

{

Console.WriteLine("Id:{0}, Name:{1}, Salary:{2}",id,name,salary);

}

}

class Program

{

static void Main(string[] args)

{

Employee emp = new Employee();

Employee emp2 = new Employee();

emp.ReadData();

emp.PrintData();

emp2.ReadData();

emp2.PrintData();

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project306

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Factorial plus nCr and nPr

/// Date : 11-Sep-2018

/// </summary>

class Math

{

private int Factorial(int n)

{

int i, fact = 1;

for (i = 1; i <= n; i++)

fact = fact \* i;

return fact;

}

public int nCr(int n, int r)

{

return Factorial(n) / (Factorial(n - r) \* Factorial(r));

}

public int nPr(int n, int r)

{

return Factorial(n) / Factorial(n - r);

}

}

class Program

{

static void Main(string[] args)

{

Math obj = new Math();

Console.WriteLine(obj.nCr(3, 2));

Console.WriteLine(obj.nPr(3, 2));

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project307

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Static class and methods

/// Date : 11-Sep-2018

/// </summary>

public static class Math

{

public static int AddNumbers(int a,int b)

{

return a + b;

}

public static int MulNumbers(int a, int b)

{

return a \* b;

}

public static int DivNumbers(int a, int b)

{

return a / b;

}

}

class Program

{

static void Main(string[] args)

{

Console.WriteLine(Math.AddNumbers(5,6));

Console.WriteLine(Math.MulNumbers(5, 6));

Console.WriteLine(Math.DivNumbers(6, 2));

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project308

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Inheritance

/// Date : 11-Sep-2018

/// </summary>

class Algebra

{

public int Add(int a, int b)

{

return a + b;

}

public int Mul(int a, int b)

{

return a \* b;

}

}

class Total:Algebra

{

public int Div(int a, int b)

{

return a / b;

}

}

class Program

{

static void Main(string[] args)

{

Total obj = new Total();

Console.WriteLine(obj.Add(3, 2));

Console.WriteLine(obj.Mul(3, 2));

Console.WriteLine(obj.Div(6, 2));

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project309

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Polymorphism(Method Overloading)

/// Date : 11-Sep-2018

/// </summary>

class Math

{

/// <summary>

/// Add of two number

/// </summary>

/// <param name="a">num 1</param>

/// <param name="b"> num 2</param>

/// <returns>Addition</returns>

public static int Add(int a, int b)

{

return a + b;

}

/// <summary>

/// Add of three number

/// </summary>

/// <param name="a">num1</param>

/// <param name="b">num2</param>

/// <param name="c">num3</param>

/// <returns>Addition</returns>

public static int Add(int a, int b,int c)

{

return a + b+c;

}

/// <summary>

/// Add of four number

/// </summary>

/// <param name="a">num1</param>

/// <param name="b">num2</param>

/// <param name="c">num3</param>

/// <param name="d">num4</param>

/// <returns>Addition</returns>

public static int Add(int a, int b,int c,int d)

{

return a + b+c+d;

}

}

class Program

{

static void Main(string[] args)

{

Console.WriteLine(Math.Add(5, 6));

Console.WriteLine(Math.Add(5, 6,7));

Console.WriteLine(Math.Add(6, 2,8,9));

Console.ReadLine();

}}}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project310

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Polymorphism(Method Overriding)

/// Date : 11-Sep-2018

/// </summary>

class EnglishMessage

{

public void PrintHi()

{

Console.WriteLine("Hi");

}

public void PrintHello()

{

Console.WriteLine("Hello");

}

public virtual void PrintGoodEvening()

{

Console.WriteLine("Good Evening");

}

}

class HindiMessage:EnglishMessage

{

public override void PrintGoodEvening()

{

base.PrintGoodEvening();

Console.WriteLine("Supravaat");

}

}

class Program

{

static void Main(string[] args)

{

HindiMessage obj = new HindiMessage();

obj.PrintHello();

obj.PrintHello();

obj.PrintGoodEvening();

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project311

{

/// <summary>

/// Author : Pritam Khan

/// Purpose :Sealed class

/// Date : 11-Sep-2018

/// </summary>

sealed class Police

{

public static void PrintSecretCode()

{

Console.WriteLine("007");

}

}

class Theft

{

//

}

class Program

{

static void Main(string[] args)

{

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project312

{

/// <summary>

/// Author : Pritam Khan

/// Purpose :Read the number from user and Print the sum of the digits

/// Date : 11-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int n,digit,sum=0;

Console.WriteLine("Enter the Number:");

n = int.Parse(Console.ReadLine());

while (n != 0)

{

digit = n % 10;

sum = sum + digit;

n = n / 10;

}

Console.WriteLine("Sum {0}",sum);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project313

{

/// <summary>

/// Author : Pritam Khan

/// Purpose :Abstract Class

/// Date : 11-Sep-2018

/// </summary>

abstract class Salary

{

public int GetPF(int basic)

{

return (12 \* basic) / 100;

}

public int GetHRA(int basic)

{

return (40 \* basic) / 100;

}

public abstract int GetTA();

public abstract int GetSP();

}

class Capgemini : Salary

{

public override int GetSP()

{

return (10000);

}

public override int GetTA()

{

return (8000);

}

}

class IGate : Salary

{

public override int GetSP()

{

return 5000;

}

public override int GetTA()

{

return 2000;

}

}

class Sogeti:Salary

{

public override int GetSP()

{

return 3000;

}

public override int GetTA()

{

return 7000;

}

}

class Program

{

static void Main(string[] args)

{

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project401

{

/// <summary>

/// Author : Pritam Khan

/// Purpose :Constructors(default and parametarised)

/// Date : 12-Sep-2018

/// </summary>

class Employee

{

public int id;

public string name;

public int salary;

/// <summary>

/// This method is used to read employee data from user

/// </summary>

public void ReadAllDetails()

{

Console.WriteLine("Enter Id:");

id = int.Parse(Console.ReadLine());

Console.WriteLine("Enter Name:");

name = Console.ReadLine();

Console.WriteLine("Enter Salary:");

salary = int.Parse(Console.ReadLine());

}

/// <summary>

/// method will print data

/// </summary>

public void PrintAllDetails()

{

Console.WriteLine("Id:{0}, Name:{1}, Salary:{2}", id, name, salary);

}

public void ReadSalary()

{

Console.WriteLine("Enter Salary");

salary = int.Parse(Console.ReadLine());

}

public Employee()

{

id = 0;

name = null;

salary = 0;

}

public Employee(int id,string name)

{

this.id = id;

this.name = name;

}

public Employee(int id, string name,int salary)

{

this.id = id;

this.name = name;

this.salary = salary;

}

}

class Program

{

static void Main(string[] args)

{

Employee emp = new Employee();

emp.ReadAllDetails();

emp.PrintAllDetails();

Employee emp2 = new Employee(1, "Pritam");

emp2.ReadSalary();

emp2.PrintAllDetails();

Employee emp3 = new Employee(2, "Pritam",4500);

emp3.PrintAllDetails();

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project402

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Using Params calculate

/// Date : 12-Sep-2018

/// </summary>

class Math

{

public static int Add(params int[] data)

{

int sum = 0;

foreach (var d in data)

sum += d;

return sum;

}

}

class Program

{

static void Main(string[] args)

{

Console.WriteLine(Math.Add(1,5));

Console.WriteLine(Math.Add(2,3,9,6,8,9,8));

Console.WriteLine(Math.Add(2, 3, 9, 6, 8, 9));

Console.WriteLine(Math.Add(2, 3, 8, 9, 8));

Console.WriteLine(Math.Add(2, 3, 9, 6, 8, 9, 8,6,7,4));

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project403

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Properties

/// Date : 12-Sep-2018

/// </summary>

class Math

{

public static int input;

public static int InputSquare

{

get

{

return input \* input;

}

}

public static int InputFactorial

{

get

{

int fact = 1;

for (int i = 1; i <= input; i++)

fact = fact \* i;

return fact;

}

}

}

class Employee

{

private int id;

private string name;

private int salary;

public int Id

{

get { return id; }

set { id = value; }

}

public string Name

{

get { return name; }

set { name = value; }

}

public int Salary

{

get { return salary; }

set { salary = value; }

}

}

class Program

{

static void Main(string[] args)

{

Employee emp = new Employee();

emp.Id = 5;

Console.WriteLine(emp.Id);

Math.input = 5;

Console.WriteLine(Math.InputSquare);

Console.WriteLine(Math.InputFactorial);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Collections;

namespace Project404

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Program to read 5 numbers to collection and find sum

/// Date : 12-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{ int sum = 0;

ArrayList data = new ArrayList();

for (int i = 1; i <= 5; i++)

{

Console.WriteLine("Enter the number");

data.Add(Console.ReadLine());

}

foreach(var n in data)

{

sum += Convert.ToInt32(n);

}

Console.WriteLine($"The sum is:{sum}");

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project405

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Program to read 5 numbers to (Generic) and find sum

/// Date : 12-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int sum = 0;

List<int> data = new List<int>();

for(int i=1;i<=5;i++)

{

Console.WriteLine("Enter any number:");

data.Add(int.Parse(Console.ReadLine()));

}

foreach (var n in data)

{

sum +=(n);

}

Console.WriteLine($"The sum is:{sum}");

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project406

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : lamda,for,foreach,LINQ

/// Date : 12-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

List<int> data = new List<int> { 45,67,90,92,35,60 };

//Lamda Expression

data.Where(d => d % 3 == 0 || d % 5 == 0).ToList().ForEach(p => Console.WriteLine(p));

Console.ReadLine();

//LINQ

var result = from d in data

where d % 3 == 0 || d % 5 == 0

select d;

foreach(var r in result)

Console.WriteLine(r);

Console.ReadLine();

//Foreach

foreach(var d in data)

{

if(d % 3 == 0 || d % 5 == 0)

Console.WriteLine(d);

Console.ReadLine();

}

//forloop

for(int i = 1; i < data.Count; i++)

{

if (data[i]% 3 == 0 || data[i] % 5 == 0)

Console.WriteLine(data[i]);

}

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project407

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Lamda,for,foreach,LINQ

/// Date : 12-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

List<string> names = new List<string>()

{ "Raj","Pritam","Chirag"};

//write the code to print names containing 'h'

//foreach

foreach (var d in names)

{

if (d.ToLower().Contains("h"))

Console.WriteLine(d);

}

Console.ReadLine();

//Lamda

names.Where(d => d.ToLower().Contains("h")).ToList().ForEach(p => Console.WriteLine(p));

Console.ReadLine();

//LINQ

var result = from d in names

where d.ToLower().Contains("h")

select d;

foreach(var r in result)

Console.WriteLine(r);

Console.ReadLine();

//For loop

for(int i=0;i<names.Count;i++)

{

if(names[i].ToLower().Contains('h'))

Console.WriteLine(names[i]);

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project408

{

/// <summary>

/// Author : Pritam Khan

/// Purpose :Add book,search book,delete book,display book

/// Date : 12-Sep-2018

/// </summary>

class Program

{

public static List<string> books = new List<string>();

static void Main(string[] args)

{

int ans;

do

{

Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

Console.WriteLine("Books Management System");

Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

Console.WriteLine("1.Add Books");

Console.WriteLine("2.Search Books");

Console.WriteLine("3.Delete Books");

Console.WriteLine("4.View Books");

Console.WriteLine("5.Exit");

Console.WriteLine("Enter the Number:");

ans = int.Parse(Console.ReadLine());

switch (ans)

{

case 1:

AddBook();

break;

case 2:

SearchBook();

break;

case 3:

DeleteBook();

break;

case 4:

ViewBook();

break;

case 5:

Console.WriteLine("Invalid choice");

break;

}

}

while (ans != 5);

Console.WriteLine("BYE BYE! Press enter to close");

Console.ReadLine();

}

public static void AddBook()

{

Console.WriteLine("Enter book name:");

books.Add(Console.ReadLine());

Console.ForegroundColor = ConsoleColor.Green;

Console.WriteLine("Details Saved");

Console.ResetColor();

}

public static void SearchBook()

{

Console.WriteLine("Enter book to Search:");

string SearchBook = Console.ReadLine();

var result = books.Where(p => p.ToLower().Equals(SearchBook.ToLower())).ToList();

if (result.Count > 0)

{

Console.ForegroundColor = ConsoleColor.Green;

Console.WriteLine("Book exist in Library");

Console.ResetColor();

}

else

{

Console.ForegroundColor = ConsoleColor.Red;

Console.WriteLine("Book does not exist in Library");

Console.ResetColor();

}

}

public static void DeleteBook()

{

Console.WriteLine("Enter book to Delete:");

string DeleteBook = Console.ReadLine();

var result = books.Where(p => p.ToLower().Equals(DeleteBook.ToLower())).ToList();

if (result.Count > 0)

{

books.Remove(DeleteBook);

Console.ForegroundColor = ConsoleColor.Green;

Console.WriteLine("Book deleted Successfully");

Console.ResetColor();

}

else

{

Console.ForegroundColor = ConsoleColor.Red;

Console.WriteLine("Book does not exist in Library");

Console.ResetColor();

}

}

public static void ViewBook()

{

Console.WriteLine("BOOKS AVAILABLE:\n");

if(books.Count==0)

{

Console.ForegroundColor = ConsoleColor.Red;

Console.WriteLine("No books available in library");

Console.ResetColor();

}

books.ForEach(n => Console.WriteLine(n));

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project409

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Try And catch block;

/// Date : 12-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

try

{

int a, b, c;

Console.WriteLine("Enter First number:");

a = int.Parse(Console.ReadLine());

Console.WriteLine("Enter Second number:");

b = int.Parse(Console.ReadLine());

c = a / b;

Console.WriteLine("ans {0}", c);

}

catch(FormatException Ex)

{

Console.WriteLine("Please double check the input!ENTER ONLY NUMBER");

}

catch(DivideByZeroException Ex)

{

Console.WriteLine("Second number can not be zero");

}

catch (Exception Ex)

{

Console.WriteLine("Some error occured.contact pritamkhn@gmail.com");

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Collections;

namespace Project501 and Project502

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Stack Queue using generic and collection;

/// Date : 14-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{ //------Stack------------

//Stack obj = new Stack();

//obj.Push(25);

//obj.Push(30);

//obj.Push(35);

//Console.WriteLine(obj.Peek());

//Console.WriteLine(obj.Pop());

//Console.WriteLine(obj.Peek());

//Console.WriteLine(obj.Pop());

//Console.ReadLine();

//---------Queue------------

//Queue data = new Queue();

//data.Enqueue(65);

//data.Enqueue(70);

//data.Enqueue(90);

//Console.WriteLine(data.Peek());

//Console.WriteLine(data.Dequeue());

//Console.WriteLine(data.Dequeue());

//Console.WriteLine(data.Peek());

//Console.WriteLine(data.Dequeue());

//Console.ReadLine();

//------Generic statck-----------

Stack<int> obj = new Stack<int>();

obj.Push(45);

obj.Push(90);

obj.Push(80);

//To print element by removing one by one

//while(obj.Count>0)

//{

// Console.WriteLine(obj.Pop());

//}

foreach(var p in obj)

{

Console.WriteLine(p);

}

Console.ReadLine();

}

}}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project503

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Lamda and Linq using ascending and descending order

/// Date : 14-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

List<int> data = new List<int>() { 87, 65, 46, 68, 93, 83 };

//Lamda

data.Where(p=>p%2==1).ToList().

OrderBy(p=>p).ToList().

ForEach (p=>Console.WriteLine(p));

//Linq

var result = from d in data

where d % 2 == 1

orderby d descending

select d;

foreach(var r in result)

Console.WriteLine(r);

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project504

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Lamda and Linq using ascending and descending order by employee salary

/// Date : 14-Sep-2018

/// </summary>

class Employee

{

public int id;

public string name;

public int salary;

}

class Program

{

static void Main(string[] args)

{

List<Employee> employees = new List<Employee>()

{ new Employee(){id=1,name="Pritam",salary=4000 },

new Employee(){id=2,name="Raj",salary=4600 },

new Employee(){id=1,name="RajM",salary=5000 },

new Employee(){id=1,name="Chirag",salary=4500 }

};

////Lamda

employees.Where(e => e.salary > 4000).ToList().

OrderByDescending(e => e.salary).ToList().

ForEach(e => Console.WriteLine($"{e.id},{e.name},{e.salary}"));

Console.ReadLine();

//Linq

var result = from e in employees

where e.salary > 4000

orderby e.salary descending

select e;

foreach(var d in result)

Console.WriteLine($"{d.id},{d.name},{d.salary}");

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using static Project505.Math;

namespace Project505

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Static class Import

/// Date : 14-Sep-2018

/// </summary>

public static class Math

{

public static void Add(int a, int b)

{

Console.WriteLine(a + b);

}

public static void Mul(int a, int b)

{

Console.WriteLine(a \* b);

}

public static void Div(int a, int b)

{

Console.WriteLine(a / b);

}

}

class Program

{

static void Main(string[] args)

{

Add(5, 6);

Mul(5, 6);

Div(6, 2);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using static Project505.Math;

namespace Project505

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Delegate

/// Date : 14-Sep-2018

/// </summary>

//delegate

public delegate void MyDelegate(int a, int b);

public static class Math

{

public static void Add(int a, int b)

{

Console.WriteLine($"Sum of{a} and {b}={a + b}");

}

public static void Mul(int a, int b)

{

Console.WriteLine($"MUL of{a} and {b}={a \* b}");

}

public static void Div(int a, int b)

{

Console.WriteLine($"Div of{a} and {b}={a / b}");

}

}

class Program

{

static void Main(string[] args)

{

MyDelegate md = new MyDelegate(Add);

md += Mul;

md += Div;

//(12,6)

md(12, 6); //Add(5, 6);

//Mul(5, 6);

//(10,5) //Div(6, 2);

md(10,5);

//(12,4)

md -= Div;

md(12, 4);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using static MyProjectLibrary.Math;

using static MyProjectLibrary.Chem;

namespace Project506

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : DLL Reference

/// Date : 14-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

Console.WriteLine(Add(5,6));

Benzen();

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace MyProjectLibrary

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : DLL Creation

/// Date : 14-Sep-2018

/// </summary>

public static class Math

{

public static int Add(int a, int b)

{

return a + b;

}

public static int Mul(int a, int b)

{

return a \* b;

}

public static int Div(int a, int b)

{

return a / b;

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace MyProjectLibrary

{

public static class Chem

{

public static void Benzen()

{

Console.WriteLine("C6H6");

}

public static void Methene()

{

Console.WriteLine("CH4");

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project601

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : 1

/// 1 2 3

/// 1 2 3 4

/// Date : 15-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

int i, n;

Console.WriteLine("Enter the number of line to print:");

n = int.Parse(Console.ReadLine());

for (i = 1; i <= n; i++)

{

for (int j = 1; j <= i; j++)

{

Console.Write($"{j} ");

}

Console.WriteLine("\n");

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.IO;

using System.Linq;

using System.Runtime.Serialization.Formatters.Binary;

using System.Text;

using System.Threading.Tasks;

namespace Project602

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Serialization and Deserialization

/// Date : 15-Sep-2018

/// </summary>

[Serializable]

public class Employee

{

public int id;

public string name;

public int salary;

}

class Program

{

public static List<Employee> employees = new List<Employee>();

static void Main(string[] args)

{

int ch;

do

{

Console.WriteLine("1.add employee");

Console.WriteLine("2.Search employee");

Console.WriteLine("3.Exit");

Console.WriteLine("Enter your choice");

ch = int.Parse(Console.ReadLine());

switch (ch)

{

case 1:AddEmployee();

break;

case 2:SearchEmployee();

break;

default:

break;

}

}

while (ch != 3);

}

public static void AddEmployee()

{

Employee emp = new Employee();

Console.WriteLine("Enter id:");

emp.id = int.Parse(Console.ReadLine());

Console.WriteLine("Enter name:");

emp.name = Console.ReadLine();

Console.WriteLine("Enter salary:");

emp.salary = int.Parse(Console.ReadLine());

//Storing new employee in collection

employees.Add(emp);

//now we will serialize this and store

Stream s = File.Open("data.txt", FileMode.Create, FileAccess.ReadWrite);

BinaryFormatter b = new BinaryFormatter();

b.Serialize(s, employees);

s.Close();

Console.WriteLine("Details Saved Successfully");

}

public static void SearchEmployee()

{

int id;

Console.WriteLine("Enter employee id to search:");

id = int.Parse(Console.ReadLine());

//get the list from file using de-serialization

Stream s = File.Open("data.txt", FileMode.Open, FileAccess.Read);

BinaryFormatter b = new BinaryFormatter();

List<Employee> emps = (List<Employee>)b.Deserialize(s);

s.Close();

var result = from e in emps

where e.id == id

select e;

if(result.Count()==0)

Console.WriteLine("No data found");

else

{

foreach(var r in result)

Console.WriteLine($"Id:{r.id},Name{r.name},Salary:{r.salary}");

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Reflection;

namespace Project603

{ /// <summary>

/// Author : Pritam Khan

/// Purpose : this program is to issustrate about reflextion concept

/// Date : 15-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

Assembly myassembly = Assembly.LoadFrom("MyProjectLibrary.dll");

//to print classes in MyProjectLibrary.dll

foreach(var types in myassembly.GetTypes())

{

//to print all method in classes

foreach(var t in types.GetMethods())

{

Console.WriteLine($"{types.Name}:{t.Name}");

}

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.IO;

using System.Text;

using System.Threading.Tasks;

namespace Project604

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Write code in c# to 1>file creation date

/// 2>file size

/// 3>directory name

/// 4>extension name

/// 5>last modified date

/// Date : 15-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

FileInfo f1 = new FileInfo("Hello.txt");

/// 1>file creation date

/// 2>file size

/// 3>directory name

/// 4>extension name

/// 5>last modified date

Console.WriteLine("\*\*\*\*\*\*\*File information below\*\*\*\*\*\*\*\*\*");

Console.WriteLine($"\ncreation Time:\t {f1.CreationTime}");

Console.WriteLine($"\nfile size:\t {f1.Length}");

Console.WriteLine($"\ndirectory name:\t {f1.DirectoryName}");

Console.WriteLine($"\nextension name:\t {f1.Extension}");

Console.WriteLine($"\nlast modified date:\t {f1.LastWriteTime}");

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project701

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : User defined Attribute

/// Date : 15-Sep-2018

/// </summary>

[AttributeUsage(AttributeTargets.Class)]

public class BookTypeAttribute:Attribute

{

private string name;

public BookTypeAttribute()

{

this.name = string.Empty;

}

public BookTypeAttribute(string name)

{

this.name = name;

}

public string Name

{

get { return name; }

set { name = value; }

}

}

[BookType(name:"Old Books")]

class Book2

{

}

[BookType(name:"New Books")]

class Book

{

}

class Program

{

static void Main(string[] args)

{

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project701

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : User defined Attribute lorry car

/// Date : 15-Sep-2018

/// </summary>

[AttributeUsage(AttributeTargets.Class)]

public class VehicleTypeAttribute:Attribute

{

private int noOfWheels;

private string make;

/// <summary>

/// Default constructor

/// </summary>

public VehicleTypeAttribute()

{

this.noOfWheels = 0;

this.make = string.Empty;

}

public VehicleTypeAttribute(int noOfWheels,string make)

{

this.noOfWheels = noOfWheels;

this.make = make;

}

public VehicleTypeAttribute(string make)

{

this.make = make;

}

public VehicleTypeAttribute(int noOfWheels)

{

this.noOfWheels = noOfWheels;

}

public string Make

{

get { return make; }

set { make = value; }

}

public int NoOfWheels

{

get { return noOfWheels; }

set { noOfWheels = value; }

}

}

[VehicleType(noOfWheels:4,make:"Tata")]

class Car

{

}

[VehicleType(noOfWheels:10,make:"Maruti")]

class Lorry

{

}

class Program

{

static void Main(string[] args)

{

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project703

{

/// <summary>

/// Author : Pritam Khan

/// Purpose : Validation For Date

/// Date : 15-Sep-2018

/// </summary>

class Program

{

static void Main(string[] args)

{

DateTime invoiceDate;

//Console.WriteLine(DateTime.Now);

Console.WriteLine("Enter Invoice Date(MM/DD/YY):");

if(!DateTime.TryParse(Console.ReadLine(),out invoiceDate))

{

Console.WriteLine("INVALID DATE ");

}

else

{

if(invoiceDate>DateTime.Now.Date)

{

Console.WriteLine("Invoice Date grater than current date");

}

else if(invoiceDate>DateTime.Now.Date)

{

Console.WriteLine("Invoice Date less than current date");

}

else

Console.WriteLine("Invoice date is today");

}

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Reflection;

using System.Text;

using System.Threading.Tasks;

namespace Algebra

{/// <summary>

/// reflextion

/// </summary>

class Program

{

static void Main(string[] args)

{

Assembly myassembly = Assembly.LoadFrom("MyLibrary.dll");

var classType = myassembly.GetTypes()[0];

MethodInfo methodInfo = classType.GetMethod("Add");

ParameterInfo[] parameters = methodInfo.GetParameters();

object classInstance = Activator.CreateInstance(classType);

object[] parametersArray = new object[] { 5, 6 };

var result = methodInfo.Invoke(classInstance, parametersArray);

Console.WriteLine(result);

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace MyLibrary

{

public class Math

{

public int a,b;

public int Add(int a,int b)

{

return a + b;

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project801

{

public class Mathematics

{

public static int Fact(int n)

{

int fact = 1;

for (int i = 1; i <= n; i++)

{

fact \*= i;

}

return fact;

}

public static int Add(int a,int b)

{

return a + b;

}

}

class Program

{

public delegate int MyDelegate(int n);

public delegate int MyDelegate2(int a,int b);

static void Main(string[] args)

{

//Anonymous type

//var emp = new { id = 5, name = "abc", salary = 100 };

Console.WriteLine("enter number");

int n = int.Parse(Console.ReadLine());

//anonymous function

MyDelegate MyFact = delegate (int p)

{

return Mathematics.Fact(p);

};

//anonymous function for add

MyDelegate2 MyAdd = delegate (int a,int b)

{

return Mathematics.Add(a, b);

};

Console.WriteLine(MyFact(n));

Console.WriteLine(MyAdd(5,4));

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Project802

{/// <summary>

/// dictionary

/// </summary>

class Program

{

static void Main(string[] args)

{

Dictionary<string, int> myscores

= new Dictionary<string, int>();

myscores.Add("Telegu", 80);

myscores.Add("Tamil", 70);

myscores.Add("hindi", 60);

myscores.Add("Bengali", 100);

myscores.Add("rathi", 30);

//to print telegu marks

Console.WriteLine(myscores["Telegu"]);

//toprint all subjects i.e. only key

foreach(var s in myscores.Keys)

Console.WriteLine(s);

//toprint all subjects

foreach (var s in myscores)

Console.WriteLine($"{s.Key}:{s.Value}");

Console.ReadLine();

}

}

}

--------------------Invoice Management System------------------------

(Entities)

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace InvoiceManagementSystem.Entities

{

[Serializable]

public class Invoice

{

//variables

private int id;

private string name;

private int price;

private DateTime invoiceDate;

//Properties

public int Id

{

get { return id; }

set { id = value; }

}

public string Name

{

get { return name; }

set { name = value; }

}

public int Price

{

get { return price; }

set { price = value; }

}

public DateTime InvoiceDate

{

get { return invoiceDate; }

set { invoiceDate = value; }

}

//default constructor

public Invoice()

{

this.id = 0;

this.name = string.Empty;

this.price = 0;

this.invoiceDate = DateTime.Now.Date;

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using InvoiceManagementSystem.Entities;

namespace InvoiceManagementSystem.Exceptions

{

public class InvoiceException:ApplicationException

{

public InvoiceException():base()

{

}

public InvoiceException(string message) : base(message)

{

}

public InvoiceException(string message,Exception innerException):base(message,innerException)

{

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.IO;

using System.Text;

using System.Threading.Tasks;

using InvoiceManagementSystem.Entities;

using InvoiceManagementSystem.Exceptions;

using System.Runtime.Serialization.Formatters.Binary;

namespace InvoiceManagementSystem.DataAccessLayer

{

public class InvoiceDAL

{

public static List<Invoice> invoices = new List<Invoice>();

public static bool AddInvoice(Invoice invoice)

{

try

{

invoices.Clear();

//get invoices from file and store

invoices = GetInvoicesFromFile();

//add new invoice

invoices.Add(invoice);

// serialize added

Stream s = File.Open("invoice.txt", FileMode.Create, FileAccess.ReadWrite);

BinaryFormatter b = new BinaryFormatter();

b.Serialize(s, invoices);

s.Close();

// Console.WriteLine("Details Saved Successfully");

return true;

}

catch (Exception Ex)

{

return false;

}

}

public static Invoice SearchInvoice(int invoiceid)

{

var invoicesObj = GetInvoicesFromFile();

var result = from i in invoicesObj

where i.Id == invoiceid

select i;

if (result.Count() == 0)

return new Invoice();

else

return result.FirstOrDefault();

}

public static List<Invoice> GetAllProducts()

{

var invoicesObj = GetInvoicesFromFile();

return invoicesObj;

}

public static List<Invoice> GetInvoicesFromFile()

{

//Deserialize and get data from file

List<Invoice> invoicesObj = new List<Invoice>();

Stream s = File.Open("invoice.txt", FileMode.OpenOrCreate, FileAccess.Read);

BinaryFormatter b = new BinaryFormatter();

if (s.Length != 0)

invoicesObj=(List<Invoice>)b.Deserialize(s);

s.Close();

return invoicesObj;

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using InvoiceManagementSystem.Entities;

using InvoiceManagementSystem.Exceptions;

using InvoiceManagementSystem.DataAccessLayer;

namespace InvoiceManagementSystem.BusinessLayer

{

public class InvoiceBL

{

public static bool ValidateInvoice(Invoice invoice)

{

StringBuilder sb = new StringBuilder();

bool ValidInvoice = true;

if(invoice.Id<=0)

{

ValidInvoice = false;

sb.Append(Environment.NewLine + "Id should be Positive Number.");//use \n in Environment.NewLine+

}

if(invoice.Name.Length<=3)

{

ValidInvoice = false;

sb.Append(Environment.NewLine+"Name should be greater than 3 characters");

}

if(invoice.Price<=100||invoice.Price>=10000)

{

ValidInvoice = false;

sb.Append(Environment.NewLine + "Price Should be 100 to 10000");

}

if(invoice.InvoiceDate<DateTime.Now.Date)

{

ValidInvoice = false;

sb.Append(Environment.NewLine + "Date should be future or current");

}

if (ValidInvoice == false)

throw new InvoiceException(sb.ToString());

return ValidInvoice;

}

public static bool AddInvoice(Invoice invoice)

{

bool invoiceAdded = false;

try

{

if(ValidateInvoice(invoice))

{

invoiceAdded= InvoiceDAL.AddInvoice(invoice);

}

}

catch(InvoiceException)

{

throw;

}

catch(Exception Ex)

{

throw Ex;

}

return invoiceAdded;

}

public static Invoice SearchInvoice(int invoiceid)

{

return InvoiceDAL.SearchInvoice(invoiceid);

}

public static List<Invoice> GetAllProducts()

{

return InvoiceDAL.GetAllProducts();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using InvoiceManagementSystem.Entities;

using InvoiceManagementSystem.Exceptions;

using InvoiceManagementSystem.BusinessLayer;

namespace InvoiceManagementSystem.PresentationLayer

{

class Program

{

static void Main(string[] args)

{

int ch;

do

{

DisplayMenu();

Console.WriteLine("Enter Your Choice:");

ch = int.Parse(Console.ReadLine());

switch (ch)

{

case 1:

AddInvoice();

break;

case 2:

SearchInvoice();

break;

case 3:

ViewAllProducts();

break;

default:

ch = 4;

break;

}

}

while (ch != 4);

}

public static void AddInvoice()

{

try

{

Invoice invoice = new Invoice();

Console.WriteLine("Enter Invoice Id:");

invoice.Id = int.Parse(Console.ReadLine());

Console.WriteLine("Enter Name:");

invoice.Name = Console.ReadLine();

Console.WriteLine("Enter Price:");

invoice.Price = int.Parse(Console.ReadLine());

Console.WriteLine("Enter Date(MM/DD/YYYY):");

invoice.InvoiceDate = DateTime.Parse(Console.ReadLine());

if (InvoiceBL.AddInvoice(invoice))

Console.WriteLine("Invoice added Successfully");

else

Console.WriteLine("Unable to Add Product");

}

catch(InvoiceException ex)

{

Console.WriteLine(ex.Message);

}

}

public static void SearchInvoice()

{

int id;

Console.WriteLine("Enter id:");

id = int.Parse(Console.ReadLine());

var result = InvoiceBL.SearchInvoice(id);

if (result.Id == 0)

Console.WriteLine("No Invoice Found");

else

Console.WriteLine($"Id:{result.Id}, Name:{result.Name}, Price:{result.Price},Date:{result.InvoiceDate}");

}

public static void DisplayMenu()

{

Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

Console.WriteLine("PRODUCT INVENTORY SYSTEM ");

Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

Console.WriteLine("1.Add product");

Console.WriteLine("2.Search product");

Console.WriteLine("3.View All Products");

Console.WriteLine("4.Exit");

}

public static void ViewAllProducts()

{

var result = InvoiceBL.GetAllProducts();

foreach (var r in result)

{

Console.WriteLine($"Id:{r.Id}, Name:{r.Name}, Price:{r.Price},Date:{r.InvoiceDate}");

}

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using PhysicsLibrary;

using ChemLibrary;

using MathLibrary;

namespace ProjectUI

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Test");

Console.WriteLine(OrganicChem.Benzene());

Console.WriteLine(Algebra.Add(5,2));

Console.WriteLine(Kinematics.Force(5,5));

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace PhysicsLibrary

{

public static class Kinematics

{

public static int FinalVelocity(int u, int a, int t)

{

return u + a \* t;

}

public static int Force(int m,int a)

{

return m \* a;

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace MathLibrary

{

public static class Algebra

{

public static int Add(int a, int b)

{

return a + b;

}

}

}