**Bai so 1**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Ex1\_LeapYear

{

class LeapYear

{

static void Main(string[] args)

{

Console.WriteLine("Year: ");

int year;

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

bool leapYear = false;

if (year % 4 == 0) {

leapYear = true;

if (year % 100 == 0) {

if (year % 400 == 0)

leapYear = true;

else leapYear = false;

}

}

if (leapYear){

Console.WriteLine("{0} is leap year.",year);

}else Console.WriteLine("{0} is not leap year.",year);

Console.ReadLine();

}

}

}

**Bai so 2**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Ex2\_Sum1perN

{

class sum1perN

{

static void Main(string[] args)

{

//sum 1+1/2+...+1/n

int n;

Console.WriteLine("Input n= ");

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

while (n<1)

{

Console.WriteLine("Please enter n>=1, n=");

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

}

float sum = 0;

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

{

sum += (float)1/i;

}

Console.WriteLine("Sum is {1:F2}", n, sum);

Console.ReadLine();

}

}

}

**Bai so 3**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Ex3\_Compute

{

class calculate

{

static void Main(string[] args)

{

Console.WriteLine("Input a=");

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

Console.WriteLine("Input b=");

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

Console.WriteLine("Operation: ");

string op = Console.ReadLine();

while (op.Length > 1) {

Console.WriteLine("Operation is character, enter again: ");

op = Console.ReadLine();

}

char operation = op[0];

float result=0;

switch (operation) {

case '+':

result = a + b;

break;

case '-':

result = a - b;

break;

case '\*':

result = a \* b;

break;

case '/':

if (b == 0)

{

Console.WriteLine("Can not divide with b==0");

Console.ReadLine();

System.Environment.Exit(1);

}

else {

result = (float)a / b;

}

break;

default:

Console.WriteLine("Operation is invalid!");

Console.ReadLine();

System.Environment.Exit(1);

break;

}

Console.WriteLine("{0} {1} {2}={3:F2}",a,operation,b,result);

Console.ReadLine();

}

}

}

**Bai so 4**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Ex4\_Quadratic

{

class quadratic

{

public static void bacNhat(double a,double b) {

if (a == 0)

{

if (b == 0)

Console.WriteLine("=> Infinity solution.");

else Console.WriteLine("=> No solution.");

}

else {

double x = -b / a;

Console.WriteLine("=> Solution: {0:F2}", x);

}

}

public static void bacHai(double a, double b,double c)

{

double x1, x2;

if (a == 0)

{

bacNhat(b,c);

}

else

{

double delta = b \* b - 4 \* a \* c;

if (delta < 0)

Console.WriteLine("=> No solution.");

else if (delta == 0)

{

x1 = -b / (2 \* a);

Console.WriteLine("=> Solution: x1=x2={0}", x1);

}

else {

x1 = (-b- Math.Sqrt(delta))/(2 \* a);

x2 = (-b + Math.Sqrt(delta)) / (2 \* a);

Console.WriteLine("=> Solution: x1={0:F5} and x2={1:F5}", x1,x2);

}

}

}

static void Main(string[] args)

{

Console.WriteLine("a= ");

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

Console.WriteLine("b= ");

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

Console.WriteLine("c= ");

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

Console.WriteLine("Equation: {0}x^2+{1}x+{2}=0",a,b,c);

bacHai(a, b, c);

Console.ReadLine();

}

}

}

**Bai so 5**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Ex5\_PrimeNumber

{

class primeNumber

{

public static bool checkPrime(int n) {

if (n == 2) return true;

else if (n > 1 && n % 2 != 0)

{

int t = (int)Math.Sqrt(n);

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

if (n % i == 0) return false;

}

else return false;

return true;

}

static void Main(string[] args)

{

Console.WriteLine("Enter number: ");

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

while (n < 2) {

Console.WriteLine("Please enter number greater than 2, enter again:");

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

}

if (checkPrime(n))

Console.WriteLine("{0} is a prime number.", n);

else Console.WriteLine("{0} is not a prime number.", n);

Console.ReadLine();

}

}

}

**Bai so 6**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Ex6\_String

{

class ex6

{

static void Main(string[] args)

{

Console.WriteLine("Enter string: ");

string str = Console.ReadLine();

char[] chars = str.ToCharArray();

int upper = 0, lower = 0, blank = 0, digit = 0, other = 0;

foreach(char c in chars){

if (char.IsWhiteSpace(c))

blank++;

else if (char.IsUpper(c))

upper++;

else if (char.IsLower(c))

lower++;

else if (char.IsDigit(c))

digit++;

else other++;

}

Console.WriteLine("=> Total character: {0}",str.Length);

Console.WriteLine("with {0} upper characters, {1} lower characters, {2} digits, {3} blank",upper,lower,digit,blank);

Console.ReadLine();

}

}

}

**Bai so 7**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Ex7\_Game

{

class game

{

public static int randomNumber(int min, int max) {

Random rd = new Random();

int n = rd.Next(min, max);

return n;

}

public static bool play(int answer) {

int turn = 0;

bool win = false;

while (turn < 7 && !win) {

turn++;

Console.WriteLine("Your turn: {0}",turn);

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

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

if (n == answer) win = true;

else if (n < answer)

Console.WriteLine("Your guest is smaller than answer.");

else

Console.WriteLine("Your guest is greater than answer.");

}

return win;

}

static void Main(string[] args)

{

Console.WriteLine("Click any keys to start game! Exit '0'");

string start = Console.ReadLine();

if(start.Equals("0"))

System.Environment.Exit(1);

while (true) {

Console.Clear();

int n=randomNumber(1,101);

if (play(n)) {

Console.WriteLine("You win!");

}else Console.WriteLine("You lose!");

Console.WriteLine("Do you want to continue? If no, enter 'No'.");

string cont= Console.ReadLine();

if (cont.Equals("No"))

System.Environment.Exit(1);

}

}

}

}