|  |
| --- |
| Nandini jadeja |
| Lab Manual |
| 170473107006 |

|  |
| --- |
|  |

**Contents**

Practical-1 .....................................................................................................................................................1

Practical-2 .....................................................................................................................................................1

**AIM:**

Introduction to c#:

-Variables:

Initialization

Scope

Constant

-Predefined Data Types

Value Types

Reference TYpes

-Flow Control

**Practical-1**

Conditional Statements(if, switch)

Loop(for, while, dowhile, foreach)

Jump(goto, break, continue, return)

-Eumerations

-Passing Arguments

using System;

namespace P1

{

class MyFirstClass

{

public static void Main()

{

Console.WriteLine("HiAll"); Console.ReadKey();

return;

}

}

}

2.constant variable using System; namespace Cant

{

public class Cant

{

public static void Main()

{

int a;

a = 99;

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

Console.ReadKey();

}

}

}

3.scope of variable using System; namespace P1

{

class Scope1

{

public static void Main()

{

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

{

Console.WriteLine(i);

}

//i goes out of Scope here

for(int i=4;i>=0;i--)

{

Console.WriteLine(i);

}

}

}

}

4.scope of variable using System; namespace P1

{

class Scope2

{

public static void Main()

{

int j;

for(int i=0;i<15;i++)

{

int j; Console.WriteLine(i);

}

}

}

}

5.

using System;

namespace P1

{

public class Scope{

static int j = 430;

public static void Main()

{

int j =900; Console.WriteLine(Scope.j);

}

}

6.consatnt variable using System; namespace P1

{

public class Const

{

public static void Main()

{

const double bonusPercent = 0.51;

int sal = 3000;

int bonus = (int)(sal \* bonusPercent); Console.WriteLine(bonus);

}

}

}

7.

using System;

namespace P1

{

public class Vector

{

public int value;

}

public class DataTypes

{

public static void Main()

{

int i;

int j;

i = 77;

j = i;

Console.WriteLine("i is {0} and j is {1}", i, j);

j = 20;

Console.WriteLine("i is {0} and j is {1}", i, j);

Vector x,y;

x = new Vector();

x.value = 33;

y = x;

Console.WriteLine("x is {0} and y is {1}", x.value, y.value);

y.value = 24;

Console.WriteLine("x is {0} and y is {1}", x.value, y.value);

}

}

}

8.integer signed or unsigned variables using System;

namespace P1

{

class IntType

{

public static void Main()

{

//Signed Variables sbyte sb = 33; short s =33 ;

int i = 33;

long l = 33L;

//Unsigned Variables byte b = 33;

ushort us = 33; uint ui = 33U; ulong ul = 33UL; us = (ushort)ul;

Console.WriteLine("{0} {1} {2} {3} {4} {5} {6} {7}", sb,s,i,l,b,us,ui,ul);

}

}

}

9.floating variables using System; namespace P1

{

public class Floatting

{

public static void Main()

{

float f = 0.123456789F;

double d = 0.112233445566778899;

decimal dec = 11223344.1112223334445556667778889999M;

f = (float)d;

Console.WriteLine("f is {0} and d is {1} and dec is {2}", f, d, dec);

}

}

}

10.boolean using System; namespace P1

{

public class Boolean

{

public static void Main()

{

bool status = true; Console.WriteLine(status);

}

}

}

11.charcter using System;

namespace P1

{

public class Char

{

public static void Main()

{

char c = 'a'; Console.WriteLine(\a);

}

}

}

**AIM:**

GTU Programs

**Practical-2**

1)Write console based program in code behind language VB or C# to print following pattern.

@ @ @ @ @

@ @ @ @

@ @ @

@ @

@

using System;

namespace Pattern

{

class PatternExample

{

public static void Main()

{

int i,j=5;

for (; j > 0; j--)

{

for (i = j; i > 0; i--) Console.Write("@ ");

Console.WriteLine();

}

}

}

}

2)Write console based program in code behind language VB or C# to print following pattern.

1

1 2

1 2 3

1 2 3 4

using System;

namespace Pattern

{

class patternExample

{

public static void Main()

{

int i, j;

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

{

for (i = 1; i <= j; i++) Console.Write(i + " ");

Console.WriteLine();

}

}

}

}

3. Write C# code to prompt a user to input his/her name and country name and then the output will be shown as an example below:

Hello Ram from country India

using System;

public class userdata

{

public static void Main()

{

string name, country; Console.Write("Enter Your Name: "); name = Console.ReadLine(); Console.Write("Enter Your Country: "); country = Console.ReadLine();

Console.WriteLine("Hello " + name + " from country " + country);

}

}

4. What is inheritance? Create C# console application to define Car class and derive Maruti and Mahindra from it to demonstrate inheritance.

using System;

public class Car

{

protected string name;

public Car(string name)

{

this.name = name;

}

public Car()

{

}

public virtual string Name

{

get{return name;}

set

{

if(value.Length>3)

name = value;

else

}

}

}

name="Unknown";

public class Maruti : Car

{

public Maruti(string name) : base(name)

{

}

public override string Name

{

get{return name;}

set

{

if(value.Length>3)

name = value + " -Maruti";

else

}

}

name="Unknown";

public bool haveAGS;

}

public class Mahindra : Car

{

public Mahindra(string name) : base(name)

{

}

public Mahindra(){}

public override string Name

{

get{return name;}

set

{

if(value.Length>3)

name = value + " -Mahindra";

else

}

}

}

name="Unknown";

public class Program

{

public static void Main()

{

Maruti car1 = new Maruti("Swift");

car1.haveAGS = true; car1.Name = "Swift"; Console.WriteLine("Details Car 1: {0} and

{1}",car1.Name,car1.haveAGS==true?"Have AGS":"not Have AGS"); Mahindra car2 = new Mahindra();

car2.Name = "XUV500";

Console.WriteLine("Car 2: {0}",car2.Name);

}

}