Day 9

C# Function And Tuples

1. Function is a small **job program.**
2. **Function separator ().**
3. Function definition – create a function
4. Function calling (Access function).
5. Variable property (return value).
6. Function statement (Container statement).

How to create function in C#?

All function in a C# create before the main body location.

Syntax –

Type function\_name()

{

statement;

}

Note: void is default type of any function (No Return value).

Ex –

void display ()

{

}

void show ()

{

}

How to access function in C#?

1. All function is to be access with the help of object.
2. All object is too created inside the main body.

Syntax –

Class\_name obj\_name = new class\_name();

New is called memory allocation operator.

Function approach – button up approach.

Function parameter/argument:

1. Receiver (Formal argument) at the time function creation.
2. Sender (Actual argument) at the time of function calling.

User Input parameter in C#

All type of input fundamental is used inside the main body.

How to create multiple parameter

Void function\_name(datatype var\_name, datetype var\_name)

Write a program to generate following result.

Create function input

Accept following parameter (name, city, age, m1, m2, m3, m4, m5)

Logic 1 Calculate total

Logic 2 check the following condition

Total > 250 and age grater > 15

Then print Grade A

Total > 150 and age > 18 and age < 25 and total < 250

Then print grade B

Otherwise print try again

Logic 3 all parameter accept by user.

Function error:

Name parameter in this concept pass all the parameter value with parameter name.

Syntax –

Parameter : value

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace function\_error

{

class Program

{

void input(int roll, string city)

{

Console.WriteLine(roll + "\n" + city);

}

static void Main(string[] args)

{

Program p1 = new Program();

p1.input(city : "Nagpur", roll : 30);

Console.ReadLine();

}

}

}

Direct value parameter is called unnamed parameter.

Local and global variable in function

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace local\_global

{

class Program

{

int a1; //Global variable

void input(int a) // a is local parameter

{

a1 = a;

}

void show()

{

Console.WriteLine(a1);

}

static void Main(string[] args)

{

Program p1 = new Program();

p1.input(10);

p1.show();

Console.ReadKey();

}

}

}

Assignment

Create a function – input ()

Accept following parameter (roll, name, city, state, college, mobile, branch, sub**ject, percentage**)

Create a function display accept all the parameter inside display function (exclude percentage)

Display all information inside display method

Create a function grade ()

Accept only percentage parameter

Check the following condition

1. Percentage > 60 – First division
2. Percentage > 50 and percentage < 60 – second division
3. Percentage > 40 and percentage < 50 – third division
4. Otherwise fail

Logic 1. Name parameter concept

Logic 2. All parameter accept by the user

Logic 3. Inside the main body only access input function (function with in a function)

Assignment 2:

Using default argument city = “Nagpur”

Assignment 3:

Convert all **javascript function inro C#**

**Assignment 4:**

**Create your idea using tuple method**

Function methodology

1. No argument no return

Void show()

{

}

Show();

1. Argument but no return

Void display (int a)

{

Console.WriteLine(a);

}

display(10);

1. Argument or return
2. By default function return single value at a time.
3. All value is to be return using return key word.
4. Void keyword can not use return keyword
   1. int no = p1.show(n); //Container variable

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace arg\_return

{

class Program

{

int show(int a)

{

Console.WriteLine("Return Value Concept : ");

return a;

}

static void Main(string[] args)

{

Program p1 = new Program();

int no = p1.show(20); //contanier variable

Console.WriteLine(no);

Console.ReadKey();

}

}

}

How to return multiple value in a function?

This concept we have to use tuple library

Tuple used to returing multi type data calue in a function

How to create Tuple?

Tuple<data\_type1, data\_type2, date\_type3> name\_of\_function(datatype1, datetype2, datatype3)

{

}

Ex-

Public Tuple <int, string, double> input(int roll, string name, double amount)

{

Return ;  
}

How to return multiple value using tuple?

Return new tuple <datatyoe1, datatype2, datatype3>(par1, par2, par3);

Return new tuple<int, string, double>(roll, name, price)

All type of member in tuple called atom.

Roll = item 1,

Name = item 2,

Tuple is used to dynamic property

All type of dynamic variable is to be create vvar keybord

Default argument