Console Properties & Methods

Tuesday, January 28, 2025 8:54 AM

using System

Console -- > Static type of class which contains static methods

Public static class Console
{

}

Properties of a console class

1. Title
2. BackgroundColor
3. ForegroundColor
4. CursorSize

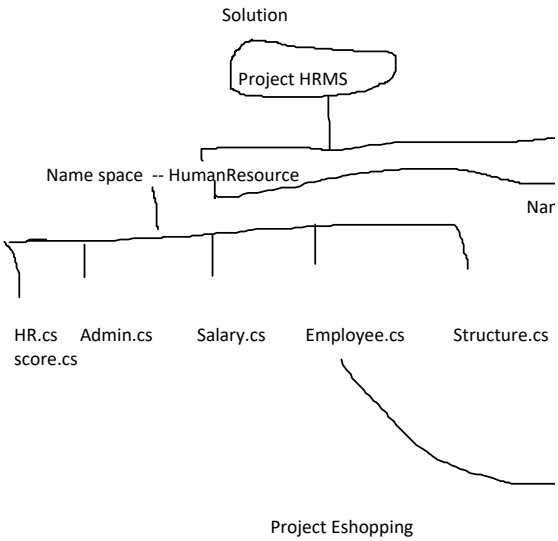
Methods of Console Class

1.Clear()
2.WriteLine()
3.Write()
4.Read()
5.ReadLine()
6.ReadKey()

Static is a keyword in which you can create static methods , static variables and the Advantage is that you can call all the static methods directly with the class name

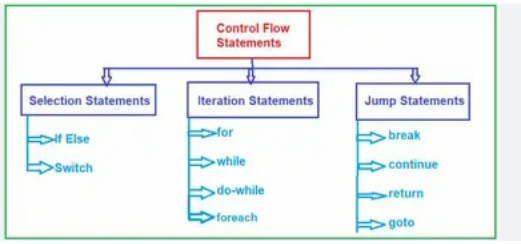
Here we have a static class Console

For eg : Console.WriteLine() , ReadLine(),ReadKey()



Control Flow Statements

1. Selection Statements or Branching Statements : If-else , switch case , nested-if-else
2. Iteration Statements or Looping statements : while loop , for , foreach , do while
3. Jumping Statements : break, continue, return , goto



Activity 1 : WAP regarding a restaurant where waiter is showing a menu using switch case to a customer

1. Pizza - Rs.100
2. Burger -- 50
3. Pasta -- Rs 200

Customer selects an item by entering its number .It should :
Display the selected item and price.
Also allow the customer to exit the program if they don't want to order.

And it will continue asking

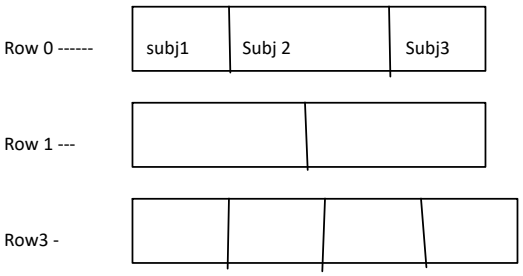
ARRAYS : collection of homogeneous items and it takes a contiguous memory location. For searching and modifying any element in an array we use index no. And it's fast
It is static or fixed in nature
ArrayList: Is dynamic in nature , adding or deleting any item

Syntax .
Eg Real based examples

Jagged Array :

```
int[][] ja = new int[3][];

ja[0] = new int[] { 1, 2, 3 };
ja[1] = new int[] { 4,5 };
ja[2] = new int[] { 6,7,8};
```



Difference between String and StringBuilder

String	StringBuilder
Immutable	Mutable
Slower for modification	Fast for modification or if you are changing the data frequently
Allocates new memory	Reuses the memory

Const string p1;
String p = "password1" after 20 days
String p = "password2"

p1 =p

Q1. if we are using the same variable then how the developer will access the value of the previous password

Value Types & Reference Type

Value type: Value types directly store their data in memory . The actual value is stored , not a reference

For eg: int a =10;

These values are stored in stack , **which is small and fast memory** used to store **temporary data.**

Stack memory is automatically managed .

Advtages :
1. Independently handle
2. Perfomance

Reference Type : it store a reference to the data's memory location rather than the actual data itself

String s = "shfhfhksfks"

The rv is stored on the stack but the actual data it their on the heap.

Heap is larger memory area

It's slow

Stack	Heap
Small , fast memory	Large , slow memory
Value types , reference variable	Actual data of reference type
Automatically cleared when out of the scope it is	managed by the GC
Short term	Long- period

Activity : create a program to preserve the original string value (Password123) even after modifying the variable , how we can achieve this and also how we restrict to modif the password in the original variable.

Let's say you have to ensure that once the password is set , it cannot be changed accidentally.

You can create two methods here

getPassword()
setPassword()

Constructor & get / setter