**Pass By Reference vs Pass By Value**

**Pass By Value:**

* **Copy parameter value to another variable**
* **Changes made inside the function are not reflected in the original value**
* **Methods gets a copy of the actual variable**
* **Requires more Memory**
* **Require more time**

**Pass By Referance:**

* **Pass actual parameter to the method**
* **Changes made inside the function are reflected in the original value**
* **Methods access the actual variable**
* **Requires less Memory**
* **Require less time**

**Pass by value هي زي مبباصي اي parameter ل function (**

**Static void ChangeNames(string first , string second){}**

**ChangeNames(FisrtName , SecondName)**

**)**

**Pass by referance بضيف كلمه ref (**

**Static void ChangeNames(ref string first , ref string second){}**

**ChangeNames(ref FisrtName , ref SecondName)**

**)**

**Pass by referance بضيف كلمه out لازم بحط initial state (**

**Static void ChangeNames(out string first , out string second){**

**first = ‘ ’**

**}**

**ChangeNames(out FisrtName , out SecondName)**

**)**

**Overloaded Methods**

**Overloading happen when two methods with the same name but different singatures .Overloaded methods are dirfrentiated based on the number and type of parameter passed as arguments to the method .**

**EX:**

**Public static void WelcomeGuest(){**

**Console.writeLine(“how can I help you”)**

**}**

**Public static void WelcomeGuest(int number){**

**Console.writeLine($“how can I help you{number}”)**

**}**

**Public static void WelcomeGuest( int num , int number2){**

**Console.writeLine($“how can I help you {num + number2}”)**

**}**

**Public static void WelcomeGuest( string name){**

**Console.writeLine($“how can I help you {name}”)**

**}**

**Classes and Objects in C#**

**Class BankAccount {**

**Public string BankName {get;set;}**

**Public string BranchName {get;set;}**

**Public string BranchAddress {get;set;}**

**Public string Account Number {get;set;}**

**Public string AccountCurrency {get;set;}**

**Public string Balance {get;set;}**

**Public void Withdrow(decimal Amount){**

**decimal newBalance= Balance – Amount**

**if(newBalance < 0){**

**Console.WriteLine(”Invalid Transaction”)**

**}else{**

**Console.WriteLine()**

**}**

**}**

**Public void Deposit(decimal Amount){}**

**Public void Transfer(decimal Amount){}**

**Public void ChangePass(decimal Amount){}**

**}**

**BankAccount Account1=new BankAccount()**

**BankAccount Account2=new BankAccount()**

**Account1.BankName=”bank Misr”**

**Account1.BankName=”bank AlAhly”**