Day 54/60 - Understanding the Difference Between Ref and Out in C#

In C#, both ref and out allow passing arguments by reference, but they have key differences.

1. ref (Requires Initialization Before Use)
 • The variable must be assigned before passing it to the method.
 • Allows modifying and returning a value.

```
void Modify(ref int number)
{
 number += 10;
}

int value = 5;
Modify(ref value);
Console.WriteLine(value); // Output: 15
```

2. out (No Initialization Required Before Passing)
 • The variable does not need to be initialized before passing.
 • Used when a method returns multiple values.

```
void GetValues(out int x, out int y)
{
 x = 5;
 y = 10;
}

int a, b;
GetValues(out a, out b);
Console.WriteLine(a + b); // Output: 15
```

3. When to Use What?

✅ Use ref when passing an existing value that needs modification.
✅ Use out when returning multiple values from a method.

Understanding these differences helps write efficient and bug-free C# code.

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