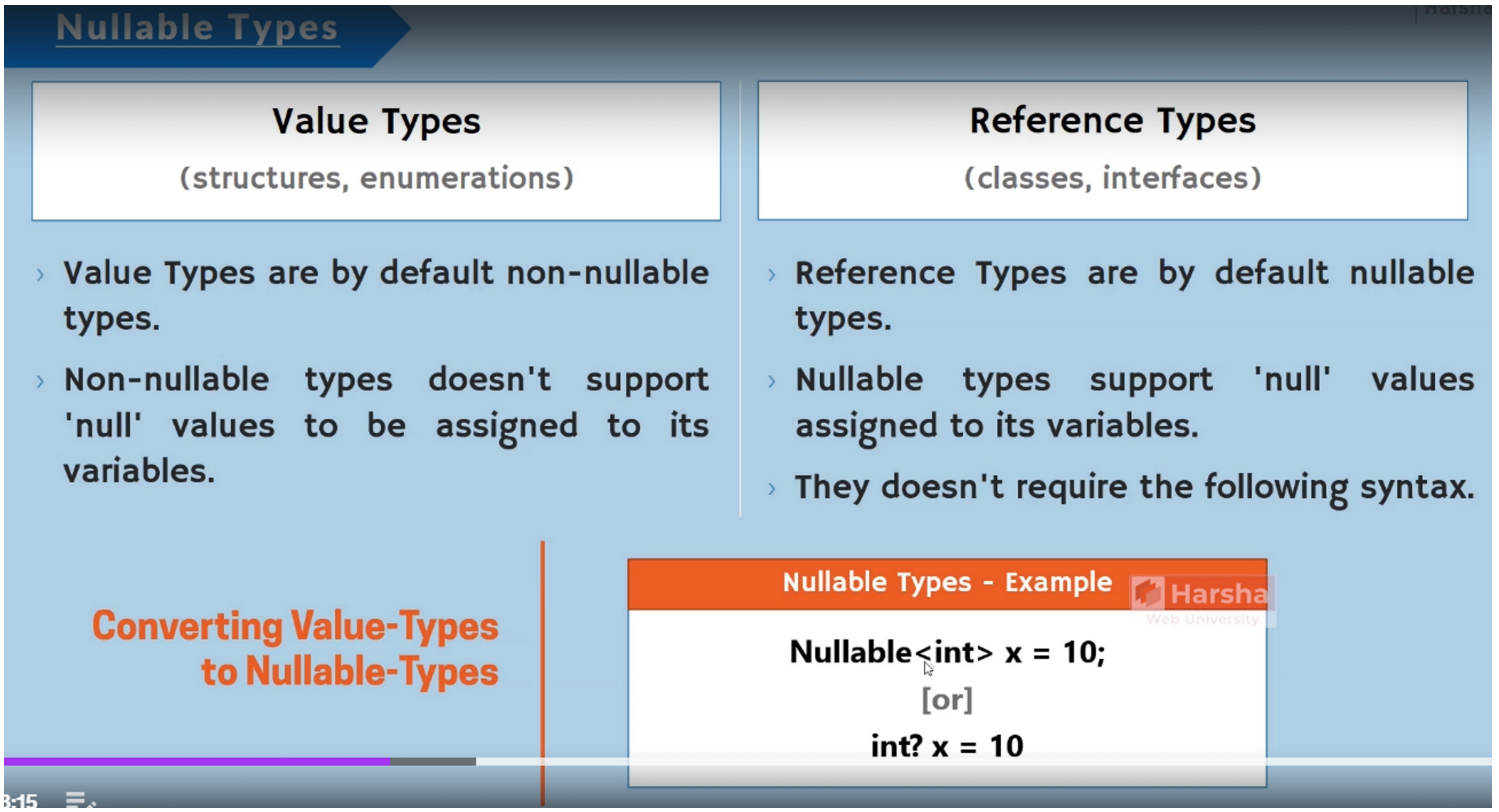
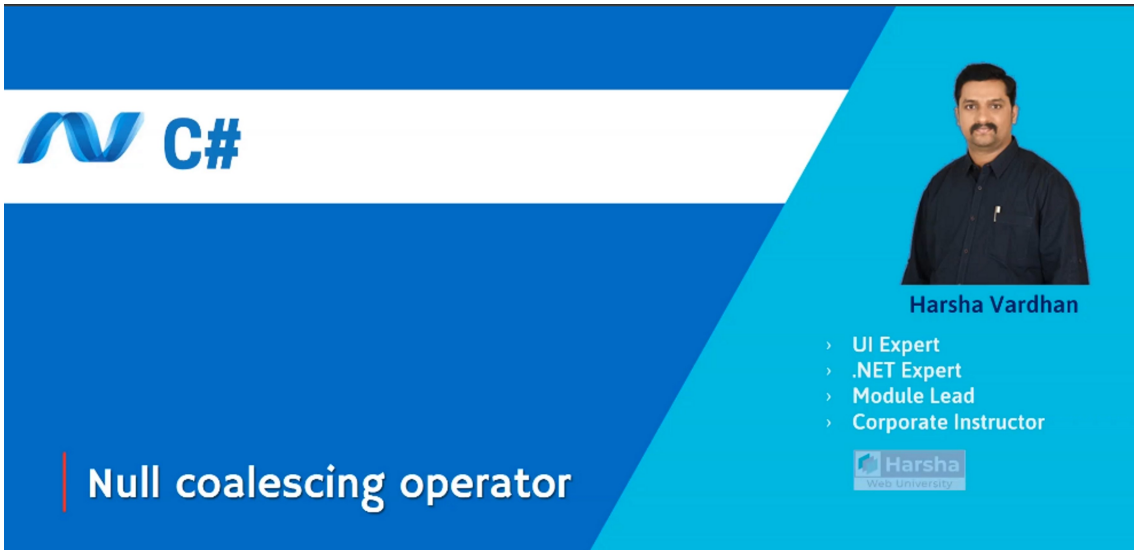
Sec 17 : Handling Null

14 July 2024 21:34

Whenever the data type supports null value, you can call it as Nullable Type. and whenever the datatype doesn't support null values, you can call it as Non-Nullable type.


Nullable Types
Value Types
(structures, enumerations)
Reference Types
(classes, interfaces)
› Value Types are by default non-nullable types.
› Non-nullable types doesn't support 'null' values to be assigned to its variables.
› Reference Types are by default nullable types.
› Nullable types support 'null' values assigned to its variables.
› They doesn't require the following syntax.
Converting Value-Types to Nullable-Types
Nullable Types - Example
Harsha
Web University
Nullable<int> x = 10;
[or]
int? x = 10


C#
Null coalescing operator
Harsha Vardhan
› UI Expert
› .NET Expert
› Module Lead
› Corporate Instructor
Harsha
Web University

Null coalescing operator

What

- The 'null coalescing operator' checks whether the value is null or not.
  - It returns the left-hand-side operand if the value is not null.
  - It returns the right-hand-side operand if the value is null.

Advantage

- Simplifying the syntax of 'if statement' to check if the value is null.

Null Coalescing Operator
variableName ?? valueIfNull

C#

Null Propagation Operator

Harsha Vardhan

- UI Expert
- .NET Expert
- Module Lead
- Corporate Instructor

Null Propagation Operator

What

- The "Null Propagation Operator (?.) and (? []) checks the value of left-hand operand whether it is null or not.
  - It returns the right-hand-side operand (property or method), if the value is not null.
  - It returns null, if the value is null.
- It accesses the property or method, only if the reference variable is "not null"; just returns "null", if the reference variable is "null".

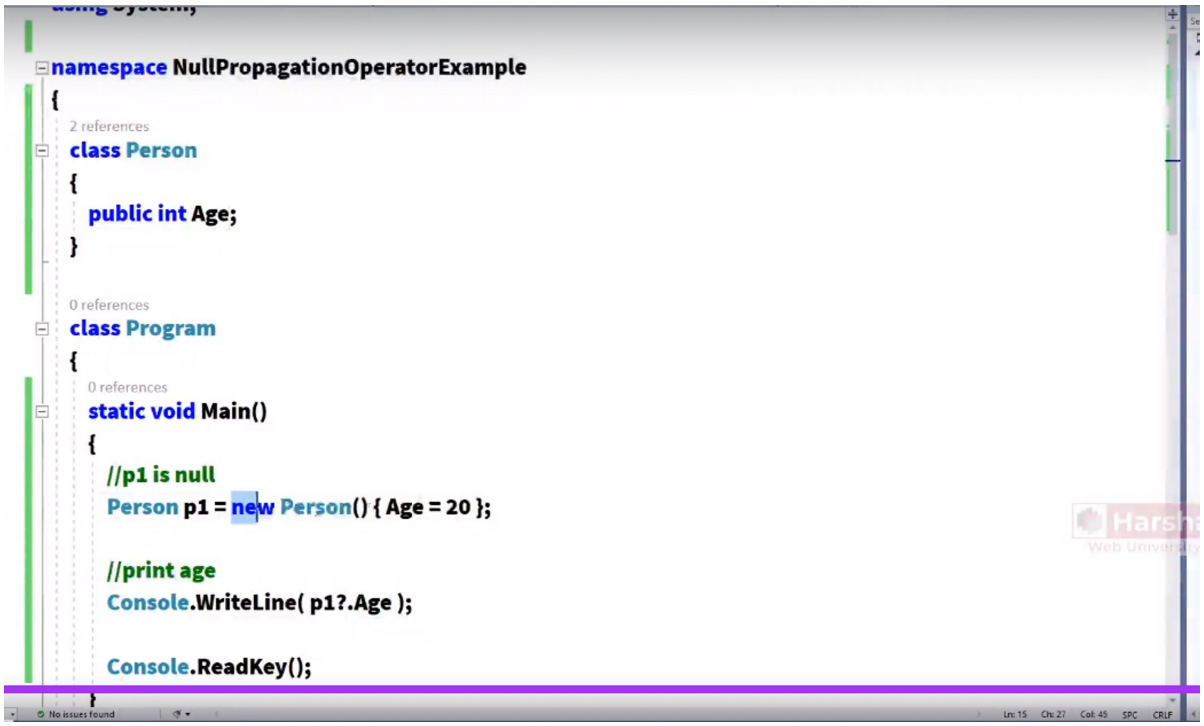
Null Propagation Operator (?.)

```
referenceVariable?.fieldName;

-- is same as --

(referenceVariable == null)? null : referenceVariable.fieldName;
```


Null Propagation Operator

Advantage

- We can invoke desired member (property or method) after checking if null.


namespace NullPropagationOperatorExample
{
2 references
class Person
{
public int Age;
}
0 references
class Program
{
0 references
static void Main()
{
//p1 is null
Person p1 = new Person() { Age = 20 };
//print age
Console.WriteLine(p1?.Age);
Console.ReadKey();
}
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