The conditional operator in C# is known as the **ternary operator** because it takes three operands. It provides a way to perform a simple conditional check in a more concise manner compared to using the **if** statement.

Conditional (Ternary) Operator

The syntax of the ternary operator is:

```
condition ? first_expression : second_expression;
```

- **condition :** A boolean expression that evaluates to either **true** or **false**.
- **first_expression :** The value or expression to return if the condition is **true**.
- **second_expression :** The value or expression to return if the condition is **false**.

Example :

```
int number = 10;

string result = (number % 2 == 0) ? "Even" : "Odd";

Console.WriteLine(result); // Output: Even
```

In this example:

- The condition is **number % 2 == 0**, which checks if **number** is even.
- If **true**, it returns **Even**.
- If **false**, it returns **Odd**.

Example of if-else Statement

The same logic can be written using an **if-else** statement:

```
int number = 10;
string result;
if (number % 2 == 0)
{
result = "Even";
}
else
{
 result = "Odd";
}
Console.WriteLine(result);       // Output: Even
```

Differences Between **if** Statement and Conditional Operator

Feature	Conditional Operator	if-else Statement
Syntax	condition ? first_expression : second_expression	if (condition) { code_if_true } else { code_if_false }
Readability	More concise for simple conditions	Better for complex logic or multiple conditions
Use Case	Ideal for assigning a value based on a condition	Suitable for executing multiple statements or more complex logic
Return Value	Always returns a value	Does not return a value by itself; instead, it executes blocks of code
Complexity	Best for single, simple conditions	More flexible, can handle complex conditions and multiple statements
Code Clarity	Can be less clear with complex conditions	Generally more clear and easier to understand

Summary

- Use the **ternary operator** when you have a simple condition and want to assign a value based on that condition in a single line.

- Use **if-else statements** when you need to execute multiple lines of code or have more complex conditional logic.