USER INPUTS & TYPE CASTING

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Understanding the Console

In programming, the console refers to the interface where input is provided and output is displayed. It serves as a medium for communication between the user and the program.

Data Types Recap

In our previous lecture, we extensively covered 5 fundamental data types:

- Integer (`int`)
- String (`string`)
- Double-precision (`double`)
- Character (`char`)
- Boolean (`bool`)

Expanding Our Data Type Knowledge

Today, we're expanding our repertoire by introducing 3 more data types.

1. **Long Data Type:** Used for storing large integer values.

```
long variableName = value;
long population = 7896541230L;
```

2. **Short Data Type:** Designed for storing small integer values.

```
short variableName = value;
short temperature = -15;
```

3. **Float Data Type:** Represents single-precision floating-point numbers.

```
float variableName = value;
float temperature = 24.5f;
```

User Inputs and Output

In the realm of programming, engaging with users through input and output operations is crucial. Revisiting the method we discussed in our previous lecture, let's once again explore how to obtain user input.

Taking User Inputs

To acquire user input, we rely on the `ReadLine` method alongside **`Console.WriteLine`** to prompt users for information. Here's a quick recap:

```
Console.WriteLine("Enter your name");
string userName = Console.ReadLine();
Console.WriteLine("Welcome, " + userName + "!");
```

By employing this approach, we create an interactive experience where users can provide input, enriching the functionality of our programs.

Type Casting

We also explored the concept of type casting, distinguishing between implicit and explicit type casting.

- **Implicit Type Casting:** Automatic conversion between compatible data types, e.g., `int` to `float`.
- **Explicit Type Casting:** Manual conversion requiring explicit instructions, potentially leading to data loss, e.g., `float` to `int`.

Conclusion

In today's lecture, we've expanded our understanding of data types, delved into input/output operations, and explored the nuances of type casting.