Python Ternary Operator

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Summary: in this tutorial, you'll learn about the Python ternary operator and how to use it to make your code more concise.

Introduction to Python Ternary Operator

The following program prompts you for your age and determines the ticket price based on it:

```
age = input('Enter your age:')

if int(age) >= 18:
    ticket_price = 20
else:
    ticket_price = 5

print(f"The ticket price is {ticket_price}")
```

Here is the the output when you enter 18:

```
Enter your age:18
The ticket price is $20
```

In this example, the following `if...else` (https://www.pythontutorial.net/python-basics/python-if/) statement assigns 20 to the `ticket_price` if the `age` is greater than or equal to 18. Otherwise, it assigns the `ticket_price` 5:

```
if int(age) >= 18:
    ticket_price = 20
else:
    ticket_price = 5
```

To make it more concise, you can use an alternative syntax like this:

```
ticket_price = 20 if int(age) >= 18 else 5
```

In this statement, the left side of the assignment operator (`=`) is the variable `ticket_price` .

The expression on the right side returns 20 if the `age` is greater than or equal to `18` or `5` otherwise.

The following syntax is called a **ternary operator** in Python:

```
value_if_true if condition else value_if_false
```

The ternary operator evaluates the `condition` . If the result is `True` , it returns the `value_if_true` . Otherwise, it returns the `value_if_false` .

The ternary operator is equivalent to the following `if...else` statement:

```
if condition:
    value_if_true
```

```
else:
    value_if_true
```

Note that you have been programming languages such as C# or Java, you're familiar with the following ternary operator syntax:

```
condition ? value_if_true : value_if_false
```

However, Python doesn't support this ternary operator syntax.

The following program uses the ternary operator instead of the `if` statement:

```
age = input('Enter your age:')

ticket_price = 20 if int(age) >= 18 else 5

print(f"The ticket price is {ticket_price}")
```

Summary

- The Python ternary operator is `value_if_true if condition else value_if_false` .
- Use the ternary operator to make your code more concise.