User input() Function

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input() Function Syntax

Function	Description
`input("prompt")`	• Pauses the program and waits for the user to enter data ta the console. • When the user presses 'Enter', this function returns the data entered by the user as a str value. • This function prints the prompt to the console before pausing to wait for the user to enter data.

Python allows for user input from the keyboard. That means you can ask the user to enter information.

You use the input() function to get user input from the console.

The returned string value from an input() function is assigned to a string variable.

The input() function always returns string data. Even when a number is entered.

String input from user

In [1]:
```
userName = input("Enter name: ")        # 'Dave' is entered at the console.
print("Hello, " + userName + "!")
```

```
Enter name: Dave
Hello, Dave!
```

Another way to get string input from user

In [2]:
```
print("What is your name? ")            # 'Dave' is entered at the console.
userName = input()
print("Hello, " + userName + "!")
```

```
What is your name?
Dave
Hello, Dave!
```

Numeric input from user

- Cast the input to the type of data needed (i.e., int or float)
- NO ValueError Exception Handling was coded here to deal with non-numeric data

In [13]:
```
print("Input a rate and a distance")

rate = float(input("Rate: "))

distance = float(input("Distance: "))

print("Time:", (distance / rate))
```

```
Input a rate and a distance
Rate: 50
Distance: 5
Time: 0.1
```

Attempt to get Numeric input from user

The TypeError below is caused because the string variables are not cast to floats (i.e., float(rate)). The calculation on line 7 causes the error because the variables 'distance' and 'rate' are string data types.

In [11]:
```
print("Input a rate and a distance")

rate = input("Rate: ")

distance = input("Distance: ")

print("rate = ", type(rate))
print("distance = ", type(distance))

print("Time:", (distance / rate))
```

```
Input a rate and a distance
Rate: 50
Distance: 5
rate =  <class 'str'>
distance =  <class 'str'>

---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-11-585baafab273> in <module>
      6 print("rate = ", type(rate))
      7 print("distance = ", type(distance))
----> 8 print("Time:", (distance / rate))

TypeError: unsupported operand type(s) for /: 'str' and 'str'
```

Decision based input from user

In [20]:
```
name = input("What is your name? ")

if name == "Dave":
    print("Welcome, good sir. You may enter!")
else:
    print("Who are you?")
```

```
What is your name? Dave
Welcome, good sir. You may enter!
```

Resources

Sources for deeper learning:

1. W3Schools.com Python User Input

1. Getting Input from users. YouTube.com

Sources used in this document:

Python User Input from W3Schools.com