Conditionals

Lab overview

A section of code that compares two pieces of information is called a conditional statement. We use conditionals to create different paths through the program. Using comparative operators, you will write a program that makes decisions.

In this lab, you will:

* Use the **if** statement
* Use the **else** statement
* Use the **elif** statement

Estimated Completion Time

45 minutes

Exercise 1: The if Statement

You will edit a Python script to ship packages:

1. Click on the **work** folder in the file tree
2. Click on the file **conditionals.py** that has been created for you:
3. Use the **input()** function to get information from the user:

userReply = input("Do you need to ship a package? (Type yes or no) ")

1. Use the **if** statement to print a response. Note, the statements in an **if** statement are one tab indented from the **if** statement. In other programming languages, brackets are often used to indicate the start and end of a logic block, but Python uses spacing:

if userReply == "yes":

print("We can help you ship that package!")

**Note**

The **==** symbol is a comparative operator; it means "is equal to".

1. Save the file.
2. To run the program, type the following at the terminal:

python3.6 conditionals.py

1. At the prompt, type **yes** and press ENTER.
2. Verify you see a response.
3. To run the program again, type the following at the terminal:

python3.6 conditionals.py

1. At the prompt, type **no** and press ENTER.

Exercise 2: The else Statement

To improve customer service, it would be nice to provide a reply even if the user does not want to ship a package. In this exercise, you will improve the Python Script by using the **else** statement:

1. To handle the condition that the user does not want to ship a package, we use the else statement:

else:

print("Please come back when you do need to ship a package. Thank you.")

1. Save the file.
2. To run the program, type the following at the terminal:

python3.6 conditionals.py

1. At the prompt, type **no** and press ENTER.
2. Verify you see a response.
3. To run the program, type the following at the terminal:

python3.6 conditionals.py

1. At the prompt, type **yes** and press ENTER.
2. Verify you see a response.

Exercise 3: The elif statement

In this exercise, you will improve the Python script by offering the user additional services. When you have multiple conditions, you can use the **elif** statement, which is short for "else-if". Note, the **elif** statement always comes after an **if** statement and before the **else** statement. Let’s return to the Python script:

1. Type the following:

userReply = input("Would you like to buy stamps, an envelope, or make a copy? (Type stamps, envelope, or copy)")

if userReply == "stamps":

print("We have plenty of stamp designs to choose from.")

elif userReply == "envelope":

print("We have many envelope sizes to choose from.")

elif userReply == "copy":

copies = input("How many copies would you like? (Type a number)")

print("Here are {} copies".format(copies))

else:

print("Thank you, please come again.")

1. Save the file.
2. To run the program, type the following at the terminal:

python3.6 conditionals.py

1. At the prompt, type **no** and press ENTER.
2. Verify you see a response.
3. At the prompt, type **stamps** and press ENTER.
4. Verify you see a response.
5. You will run through the program a second time but go through a different path. Type the following at the terminal to run the program:

python3.6 conditionals.py

1. At the prompt, type **yes** and press ENTER.
2. Verify you see a response.
3. At the prompt, type **envelope** and press ENTER.
4. Verify you see a response.
5. You will run through the program a third time but go through a different path. Type the following at the terminal to run the program:

python3.6 conditionals.py

1. At the prompt, type **no** and press ENTER.
2. Verify you see a response.
3. At the prompt, type **copy** and press ENTER.
4. Verify you see a response.
5. At the prompt, type **2** and press ENTER.
6. Verify you see a response.

Note, the **if**, **elif**, and **else** statements only allow one path to be executed at a time. The program doesn’t check the other statements once it finds a condition that is true.

As you can see, each time through the program is slightly different. That is the power of conditionals.

Congratulations, you have written a Python script that uses **if**, **elif**, and **else** statements.

STOP

You have successfully completed this lab.