Exercises for Introduction to Python Part I

Programming II - KI08
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Exercise 1: Printing

Store a message in a variable and then print it.

Exercise 2: The famous quote

Find a quote from a famous person you admire. Print the quote and the name of its author.

Exercise 3: Mathematical Operations

For each mathematical operation (addition, subtraction, multiplication, division) write code, such that the result is always 10.

Exercise 4: Greeting your friends

Store five of your friends names in a list. Use a for loop to iterate through the list and print Hello FRIENDSNAME! for ich entry. Comment your code.

Exercise 5: Your favorite food

Start with an empty list. Think of the ingredients for your favorite food and append them to the list one after each other. Then iterate through the list and print what is needed for the recipie.

Exercise 6: Places to visit

Think of at least five places in the world you'd like to visit.

- Store the locations in a list. Make sure the list is not in alphabetical order.
- Print your list in its original order. Don't worry about printing the list neatly, just print it as a raw Python list.
- Use sorted() to print your list in alphabetical order without modifying the actual list.
- Show that your list is still in its original order by printing it.
- Use sorted() to print your list in reverse alphabetical order without changing the order of the original list.
- Show that your list is still in its original order by printing it again.
- Use reverse() to change the order of your list. Print the list to show that its order has changed.

- Use reverse() to change the order of your list again. Print the list to show it's back to its original order.
- Use sort() to change your list so it's stored in alphabetical order. Print the list to show that its order has been changed.
- Use sort() to change your list so it's stored in reverse alphabetical order. Print the list to show that its order has changed."

Exercise 7: A day at the zoo

Think of at least three different animals that have a common characteristic. Store the names of these animals in a list, and then use a for loop to print out the name of each animal.

- Modify your program to print a statement about each animal, such as A dog would make a great pet.
- Add a line at the end of your program stating what these animals have in common. You could print a sentence such as Any of these animals would make a great pet!"

Exercise 8: Cubes

A number raised to the third power is called a cube. For example, the cube of 2 is written as 2 ** 3 in Python. Make a list of the first 10 cubes (that is, the cube of each integer from 1 through 10), and use a for loop to print out the value of each cube.

Repeat the exercise using list comprehension.

Exercise 9: Slicing

Using the list from Exercise 6, add several lines to the end of the program that do the following:

- Print the message, The first three items in the list are:. Then use a slice to print the first three items from that program's list.
- Print the message, Three items from the middle of the list are:. Use a slice to print three items from the middle of the list.
- Print the message, The last three items in the list are:. Use a slice to print the last three items in the list.