

Categorizing Values

Lab overview

With Python, you can mix types in a list. In this lab, you will create a list with different types and print the values.

In this lab, you will:

- Use numeric data types
- Use string data types
- Use the list data type
- Use a `for` loop
- Use the `print()` function

Estimated completion time

30 minutes

Accessing the AWS Cloud9 IDE

1. Start your lab environment by going to the top of these instructions and choosing **Start Lab**.

A **Start Lab** panel opens, displaying the lab status.

2. Wait until you see the message *Lab status: ready*, and then close the **Start Lab** panel by choosing the **X**.
3. At the top of these instructions, choose **AWS**.

The AWS Management Console opens in a new browser tab. The system automatically logs you in.

Note: If a new browser tab does not open, a banner or icon at the top of your browser typically indicates that your browser is preventing the site from opening pop-up windows. Choose the banner or icon, and choose **Allow pop ups**.

4. In the AWS Management Console, choose **Services** > **Cloud9**. In the **Your environments** panel, locate the **reStart-python4-cloud9** card and choose **Open IDE**.

The AWS Cloud9 environment opens.

Note: If a pop-up window opens with the message *.c9/project.settings have been changed on disk*, choose **Discard** to ignore it. Likewise, if a dialog window prompts you to *Show third-party content*, choose **No** to decline.

Creating your Python exercise file

5. From the menu bar, choose **File > New From Template > Python File**
6. Delete the sample code from the template file.
7. Choose **File > Save As...**, and provide a suitable name for the exercise file (for example, *categorize-values.py*) and save it under the **/home/ec2-user/environment** directory.

Accessing the terminal session

8. In your AWS Cloud9 IDE, choose the **+** icon and select **New Terminal**.
A terminal session opens.
9. To display the present working directory, enter `pwd`. This command points to **/home/ec2-user/environment**.
10. In this directory, you should also be able to locate the file you created in the previous section.

Exercise 1: Creating a mixed-type list

You can mix data types in a Python list. In other languages, this capability is not a feature of lists. In this exercise, you will explore this capability.

11. From the navigation pane of the IDE, choose the **.py** file that you created in the previous *Creating your Python exercise file* section.
12. Define a list with different types, like the following example:

```
myMixedTypeList = [45, 290578, 1.02, True, "My dog is on the bed.", "45"]
```

13. Use a `for` loop statement to traverse the list and print the data type for each item in the list:

```
for item in myMixedTypeList:  
    print("{} is of the data type {}".format(item,type(item)))
```

14. Save and run the file.
15. Confirm that the script runs correctly and that the output displays as you expect it to.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

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```
45 is of the data type <class 'int'>
290578 is of the data type <class 'int'>
1.02 is of the data type <class 'float'>
True is of the data type <class 'bool'>
My dog is on the bed. is of the data type <class 'str'>
45 is of the data type <class 'str'>
```

This exercise reinforced the Python programming concepts that were covered in labs 1–6. Although the code has only a few lines, it is powerful. Take some time to review the code and make sure you understand everything that happens in it.

Congratulations! You have worked with the list data type and learned about Python support for mixing data types in a list declaration.

End Lab

Congratulations! You have completed the lab.

16. Choose **End Lab** at the top of this page, and then select Yes to confirm that you want to end the lab.

A panel indicates that *DELETE has been initiated... You may close this message box now.*

17. A message *Ended AWS Lab Successfully* is briefly displayed, indicating that the lab has ended.

Additional Resources

For more information about AWS Training and Certification, see <https://aws.amazon.com/training/> (<https://aws.amazon.com/training/>).

Your feedback is welcome and appreciated. If you would like to share any suggestions or corrections, please provide the details in our AWS Training and Certification Contact Form (<https://support.aws.amazon.com/#!/contacts/aws-training>).

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☐ Yes

☐ No

< Rubric: 5 - Categorize Values | Points: 0 >

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