Creating a Hello, World Program

Lab overview

Welcome to Introduction to Programming. For the labs, you will use the Python programming language.

In this lab, you will write your first Python program

Estimated completion time

45 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-python-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 of the AWS Cloud9 IDE, choose **File > New From Template > Python File**.

   This action creates an untitled file.

6. Delete the sample code provided to you in the template file.

7. Choose **File > Save As...**, and provide a suitable name for the exercise file (for example, *hello-world.py*) and save it under the **/home/ec2-user/environment** directory.

   > **Note:** The *.py* is the extension for Python files.

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: Introducing Python

Python is a high-level, general-purpose programming language. *Programming languages* are used to write instructions for computers. *High-level* means that Python commands are written with a combination of English words and special symbols. *General-purpose* means that Python is used by many people for different types of applications, such as desktop applications and websites.

Python has two major releases in use today, which are known as Python version 2.*x* and Python version 3.*x*. For *Introduction to Programming*, you will use Python version 3.6.*x*. Backward compatibility means that legacy code continues to work in new versions of the language. Generally, Python remains backward compatible within minor version releases. However, the major versions have syntax incompatibilities between them, such as between Python version 2.*x* and Python version 3.*x*.

The **python.org** website has installers and general documentation for Python.

Most systems will have one or more versions of Python installed, with Python version 2.7 as the default.

11. To confirm the default version of Python that is installed in your lab, in the open terminal tab, enter:

```
python --version
```

12. To check other available versions of Python, enter the following commands:

```
python2 --version
python3 --version
```

17. You might see results similar to the following examples:

```
~ $ python --version                                                    Pyt
hon 3.6.12
~ $ python2 --version                                                   Pyt
hon 2.7.18
~ $ python3 --version                                                   Pyt
hon 3.6.12
```

Exercise 2: Writing your first Python program

When someone learns how to program, it is traditional to start with the *Hello, World* program. This simple program verifies that you have installed the Python tools correctly.

13. From the navigation pane of the IDE, choose the file that you created in the previous *Creating your Python exercise file* section.
14. In the file, enter the following code:

    ```
    print("Hello, World")
    ```

15. To save your file, choose **File > Save**.
16. Near the top of the IDE window, choose the **Run** (Play) button.
17. In the bottom pane of the IDE, confirm that the program prints the words *Hello World*.

Congratulations! You have written your first Python program.

End Lab

Congratulations! You have completed the lab.

18. 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.*

19. 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).

- ○ Yes
- ○ No

< Rubric: 1 - Hello World | Points: 0 >

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