SAND

Python Webinar 5

2407 Data Science

DECEMBER 2024

Python

Timeline

Python_Week 2

Form Team
Choose Dataset

Python_Week 3

Get to know Github
Meet your Team

Python_Week 4

Create Notebook & Github Repo
Get to Know your Data:

Python_Week 5

Start with EDA

Python_Week 6

Continue with EDA

Python_Week 7

Continue with EDA
Start with Conclusion and Insights

Python_Week 8

Finalize Notebook

Python_Week 9

Python Theory Exam

Python_Week 10

Python Practical Exam

Agenda

01 | Announcements

02 | Introduction to Python packages

03 | Demo

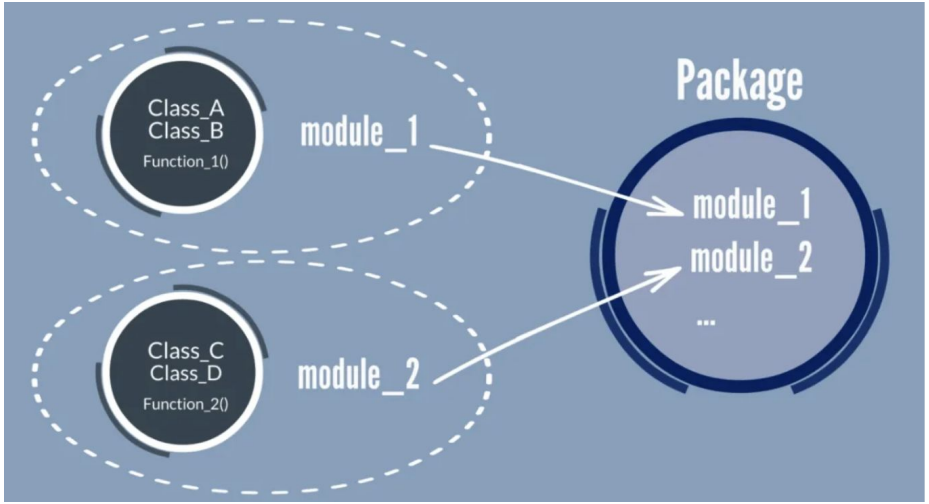
Python

Announcements

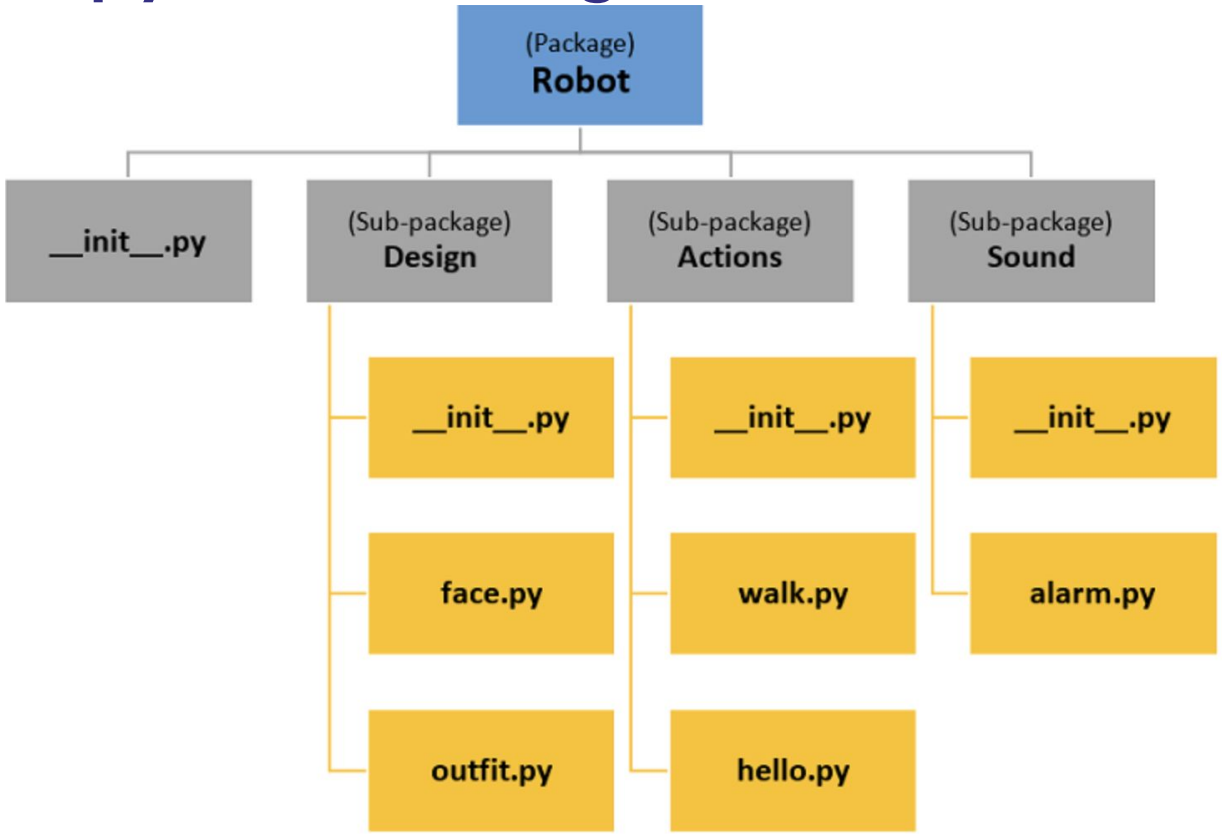
- This week we only have one webinar.
- Please note that the Academy will be closed from December 13 to January 9.
- Python Week 6 (16 – 20 December 2024) will not have webinars, kindly work on Athena content and final project.
- Integrated Project: Understanding Maji Ndogo's agriculture [Code Challenge] is due on **Monday, 13 January 2025 23:59 CAT.**

What is a python Package?

- Packages in Python are similar to directories or folders.
- Sub-packages and modules
- Python has a hierarchical directory structure
- A directory in python (package) must contain a file named __init__.py



What is a python Package?

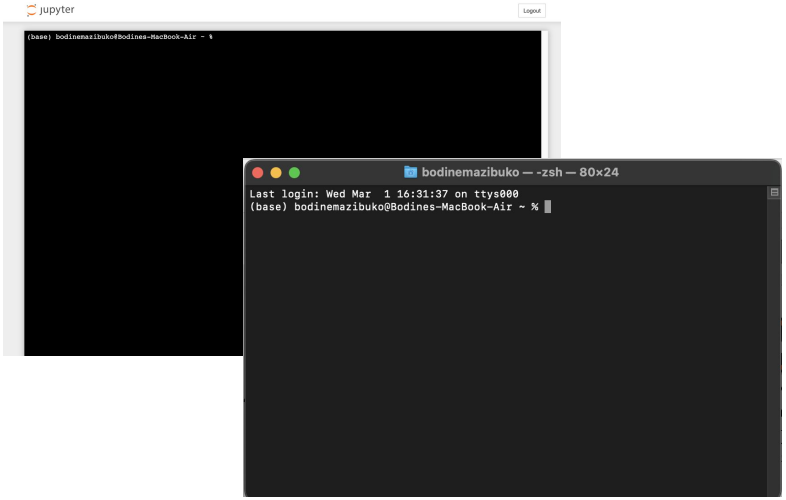


Python

Installing python packages

1. Open a terminal or command prompt

2. Type the following command to install your package



ANACONDA.

```
conda install <package-name>
```

Python 2.7 + 3 Python

```
pip install <package-name>/ pip3 install <package-name>
```

Python

Tips

- To get a list of all the python packages currently installed in your python environment

```
conda list
```

```
pip3 freeze / pip freeze
```

- To check for the particular version of the the python package you have installed

```
conda list <package-name>
```

```
pip show <package-name> / pip3 show <package-name>
```

- To update a package

```
conda update <package-name>
```

```
pip install --upgrade <package-name>
pip3 install --upgrade <package-name>
```

- To update all the packages you have installed in your environment

```
conda update --all
```

```
pip freeze | xargs pip install -U
pip3 freeze | xargs pip install -U
```

Access packages and modules in a python program

- To access the module 'hello', simply call:

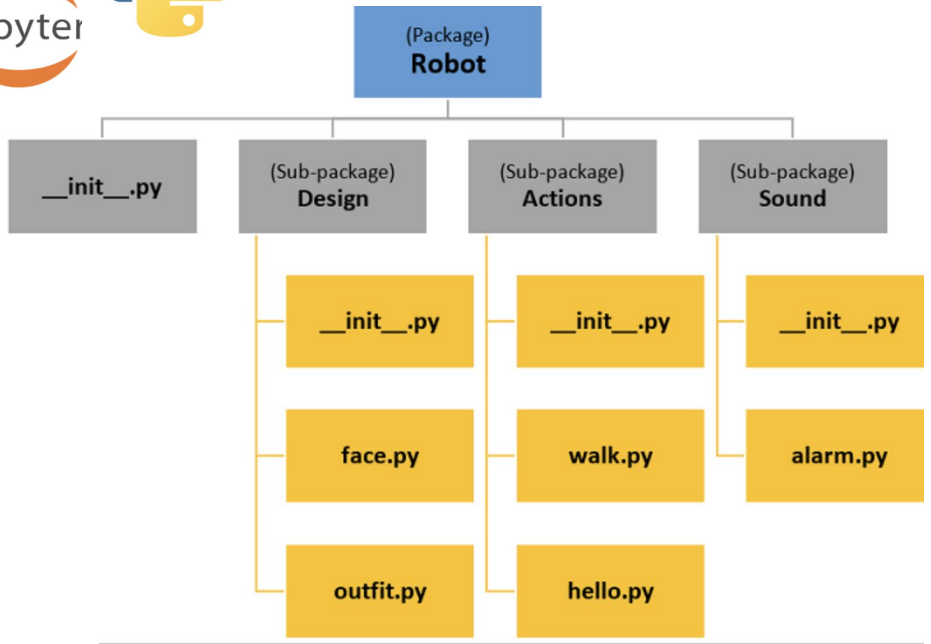
```
import Robot.Actions.hello
```

Another way to access module 'hello' is:

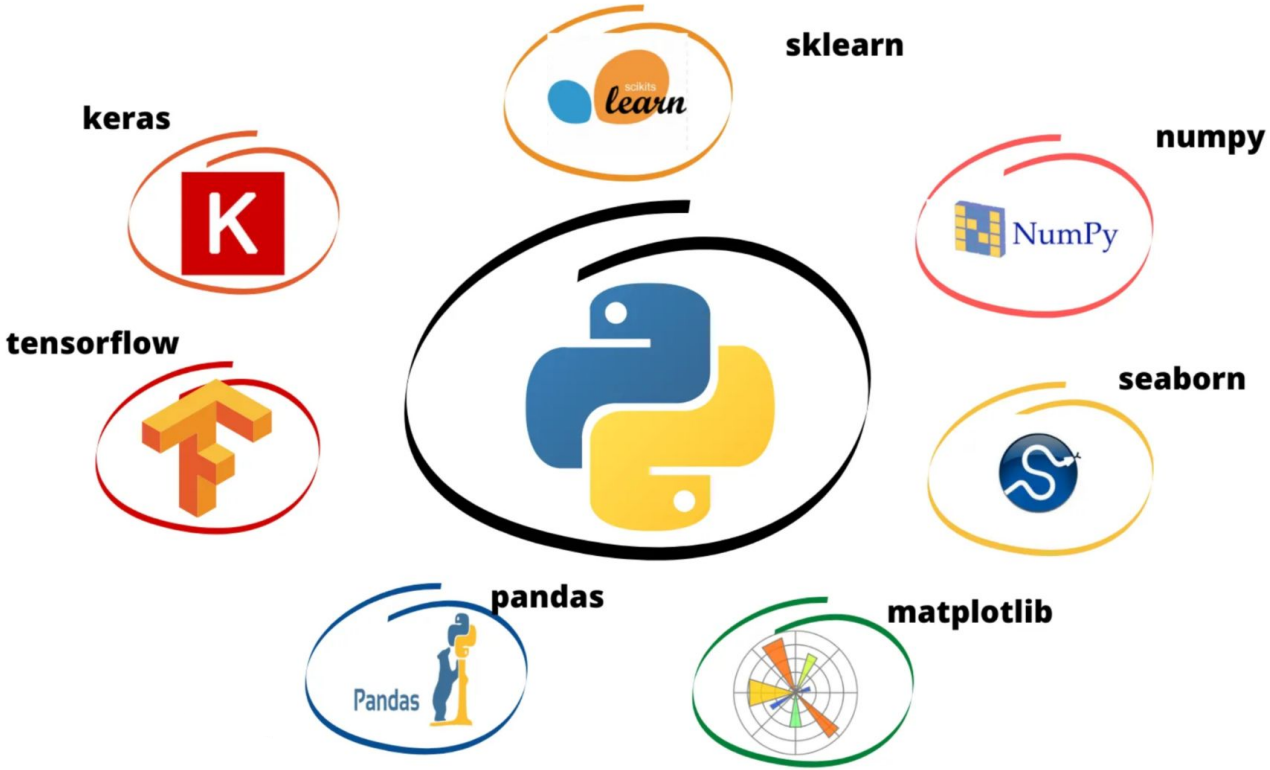
```
from Robot.Actions import hello
```

To access all the module and sub-packages

```
from Robot import *
```



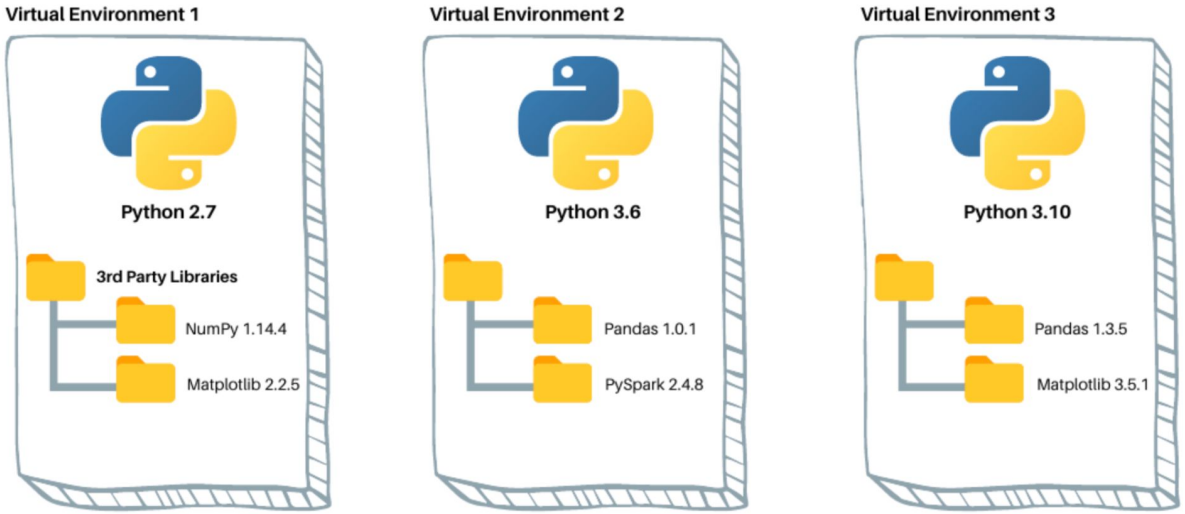
Popular python packages



Python

python environments

- Self-contained directory or folder
- It is an isolated space where you can install and manage different versions of Python and their associated packages



Python

Creating and Activating a Python environment.

To create a Python environment, you can use a package manager such as conda

1. Open a terminal or command prompt.
2. Type the following command and replace env_name with your desired environment name
3. Press Enter and follow the prompts to confirm the installation.

```
conda create --name env_name
```

To activate a Python environment

1. Once the installation is complete, activate the environment by typing:

```
conda activate env_name
```

Now you can install specific Python packages within your new environment.

Demo

Thank You

Python

Timeline

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