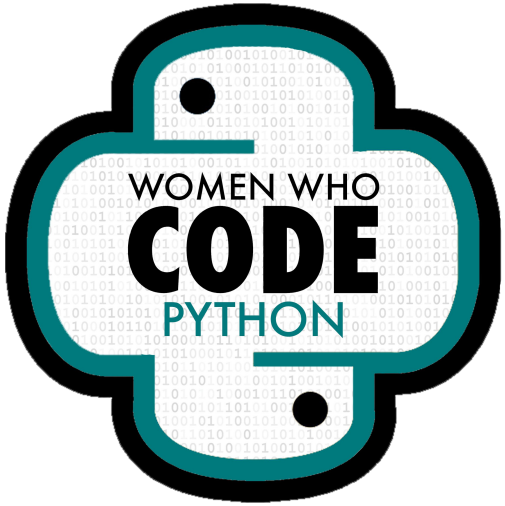
WELCOME

WOMEN WHO CODE

Women Who Code Python

Python Libraries 101



OUR MISSION

Inspiring women to excel in technology careers.

WOMEN WHO CODE

OUR VISION

A world where diverse women are better represented as engineers and leaders in technology.

WOMEN WHO CODE

OUR TARGET

Engineers with two or more years of experience looking for support and resources to strengthen their influence and levelup in their careers.

WOMEN WHO CODE

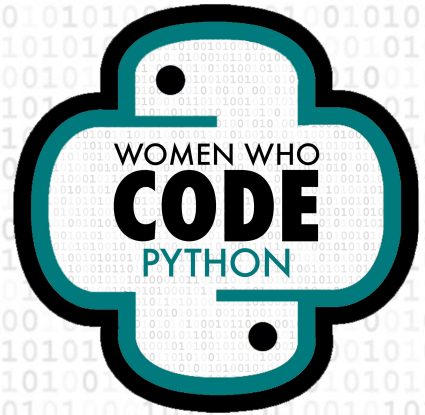
CODE OF CONDUCT

WWCode is an inclusive community, dedicated to providing an empowering experience for everyone who participates in or supports our community, regardless of gender, gender identity and expression, sexual orientation, ability, physical appearance, body size, race, ethnicity, age, religion, socioeconomic status, caste, creed, political affiliation, or preferred programming language(s).

Our events are intended to inspire women to excel in technology careers, and anyone who is there for this purpose is welcome. We do not tolerate harassment of members in any form. Our **Code of Conduct** applies to all WWCode events and online communities.

Read the full version and access our incident report form at **womenwhocode.com/codeofconduct**

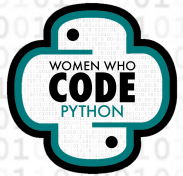
WOMEN WHO CODE



Python Libraries 101:

Python Standard Library

Session # 1



Soumya Vemuri
CSE Student

Shermaine Ang
Incoming EIE Freshman at Imperial College London

Karen Wong
Programmer at R&D Company

Meet Your Team!

WOMEN WHO CODE PYTHON

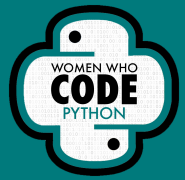
Speaker

SOUMYA VEMURI

CSE Undergrad
WWC Python Track Volunteer
linkedin.com/in/soumyavemuri

Today's Agenda

1. Introduction to the Series
2. What is the Python Standard Library?
3. Modules we'll be exploring today
   a. sys
   b. os
4. Setup and Guidelines
5. Hands-on Coding



Python Libraries 101

Welcome to the series!

- The series will cover popular Python libraries used everyday, over a range of fields.
- Each session will begin with a conceptual presentation followed by code walkthroughs and hands-on implementation.
- Sessions will be held every week at 10 am EDT

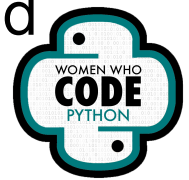
WOMEN WHO CODE PYTHON

Welcome to the series!

- The series will start by exploring popular modules in the Python Standard Library such as
  - file system libraries os and sys,
  - math utilities statistics, math and random and
  - data type libraries collections, datetime and calendar.

- The python standard library will be followed by learning data visualization libraries matplotlib, seaborn and plotly.

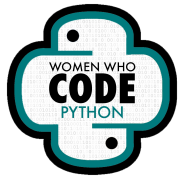
- More libraries such as tkinter, numpy, pandas, OpenCV and more will be discussed further into the series!



Python Standard Library

What is the Python Standard Library?

- Python offers a lot of built-in functionality through its standard library.
- Built-in modules are written in C and integrated with the Python shell.
- The standard library is a huge collection of utilities, ranging from math utilities to debugging to creating graphical user interfaces. Popularly used modules are os, sys, json, re, random, math urllib, tkinter, datetime



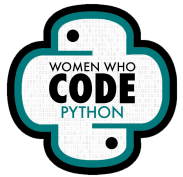
sys

Sys Module

- The sys module provides functions and variables used to manipulate different parts of the Python runtime environment.
- It provides access to the variables and functions that interact strongly with the interpreter
- For example;
  - sys.argv returns a list of command line arguments passed to a Python script.
- **Syntax:** *import sys*

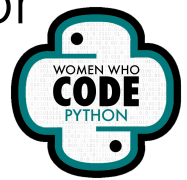
Sys Module: Variables

- **sys.modules** displays a dictionary that maps module names to modules which have already been loaded
- **sys.platform** displays a string containing a platform identifier
- **sys.version** displays a string containing the version number of the current Python interpreter
- **sys.path** displays an environment variable that is a search path for all Python modules



Sys Module: Functions

- sys.argv[index] returns a list of command line arguments passed to a Python script.
- sys.getsizeof(*object*) returns the size of an object in bytes.
- sys.stdin() returns the input from the command line directly. It is used for standard input.
- sys.stdout() is used to display output directly to the output window.
- sys.exit([arg]) is used to exit to either the Python console or the command prompt



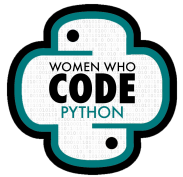
os

Os Module

- The OS module in Python provides functions for interacting with the operating system.
- The OS module in Python provides functions for creating and removing a directory, fetching its contents, changing and identifying the current directory and more.
- **Syntax:** *import os*

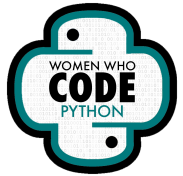
Os Module: Functions

- os.getcwd() returns the current working directory
- os.mkdir(*path+filename*) creates a new directory
- os.chdir() switch/change directories
- os.rmdir(*path*) removes the specified directory either with an absolute or relative path
- os.listdir(*path*) returns the list of all files and directories in the specified path
- os.rename(src, dst) renames the file or directory src to dst



Os Module: Functions

- os.open(file, flags[, mode]) returns the file descriptor for the newly opened file
- os.fchdir(fd) change the current working directory to the directory represented by the file descriptor fd
- os.environ() is used to access environment variables
- os.putenv(key, value) sets the environment variable named key to the string value
- os.path.join() concatenates 2 strings together to make it a path



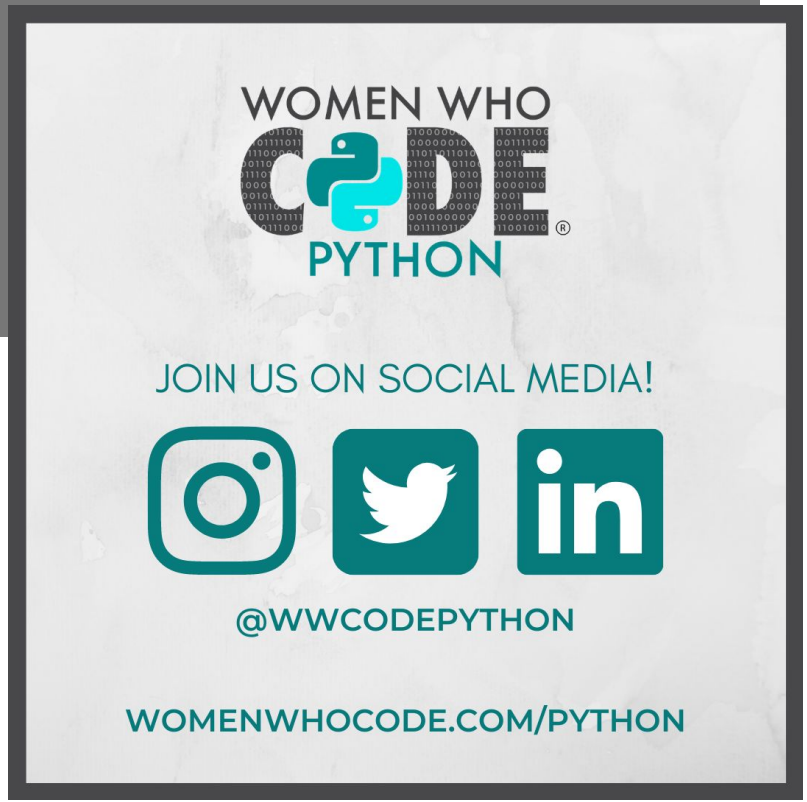
QnA Time!

Let's Code!

Useful Links

- Link to repository
- Python Documentation
  - os: https://docs.python.org/3/library/os.html
  - sys: https://docs.python.org/3/library/sys.html
- Other Resources
  - https://www.tutorialsteacher.com/python/python-builtin-modules
  - https://www.geeksforgeeks.org/python-sys-module/
  - https://www.geeksforgeeks.org/os-module-python-examples/

Stay Connected!



Upcoming Events in the Series

- ➔ Python Standard Library: datetime, time & calendar
- ➔ Python Standard Library: collections and itertools
- ➔ Python Standard Library: random, math and statistics

.....and more!

Upcoming Events

FRI 30 JUL
Beginner Python Study Group: Introduction to Functions *Featured*
Online | Python | 5:30 AM - 6:30 AM IST (UTC+0530)
Register

SAT 31 JUL
Python Libraries 101 *Featured*
Online | Python | 7:30 PM - 8:30 PM IST (UTC+0530)
Register

TUE 03 AUG
Open Source is Better with You in It: Getting Started with Open Source *Featured*
Online | Python | 9:00 PM - 10:00 PM IST (UTC+0530)
Register

Register at: https://www.womenwhocode.com/python/events

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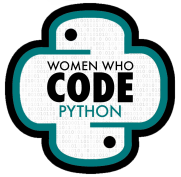
Thank You for Joining!