Bootcamp 134 | Python

Course 19 | Advanced Content

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Content

- Python Scripting
- Argument Parsing with argparse
- Date & Time Handling in Python
- Logging in Python

Python Scripting

- Understanding Python Scripts.
- Difference between Modules and Scripts.
- The if __name__ == "__main__": construct.
- Organizing and structuring Python scripts for reusability and clarity.

Python Scripting | How to Create?

- Write a python file (For example: test.py)
- Add shebang (#!) at first of file (#!/usr/bin/env python3)
- Write your code!
- Run file in terminal (./test.py)
- Add output of script to a file with:
  - > output.txt
- Append output of script to a file with:
  - >> output.txt

Argument Parsing with argparse

- Overview of sys.argv vs argparse.
- Adding arguments: positional and optional.
- Argument types and validation (choices, type, required).
- Help messages and default values.
- Subcommands and mutually exclusive arguments.

Argument Parsing with argparse | How to Work?

Date & Time Handling in Python

- Working with the datetime and time modules.
- Getting and formatting the current date and time: strftime() and strptime().
- Calculations using timedelta.
- Converting timestamps to datetime and vice versa.

Date & Time Handling in Python | Datetime

- Import datetime
  - datetime.datetime.now()
  - datetime.date.today() # with .year, .month, .day, .hour, .minute, .second
  - datetime.datetime
  - datetime.date(year, month, day)
  - datetime.time(hour, minute, second)
  - datetime.datetime(year, month, day, hour, minute, second, microsecound)
  - delta = datetime.timedelta(days=5, hours=3)

Date & Time Handling in Python | Options

- datetime.datetime.now().strftime(pattern) # convert datetime to string
- datetime.datetime.strptime(string, pattern) # convert string to datetime
- datetime.datetime.fromtimestamp(number) # convert timestamp to datetime
- datetime.datetime.timestamp(datetime) # convert datetime to timestamp

Date & Time Handling in Python | Time

- import time
  - time.time()
  - time.ctime(second)
  - time.sleep(second)
  - …

Logging in Python

- The importance of logging over print().
- Logging levels: DEBUG, INFO, WARNING, ERROR, CRITICAL.
- Setting up and customizing the logging format.
- Writing logs to a file.
- Exception logging for debugging.

Any question?

Next course

- Setup and Configuration
- Working with Files
- Branching and Merging
- Remote Repositories
- Git Help