PYTHON WORKBOOK – SECTION 6

File Handling in Python

Programmer's Hub – by CodeWithVivek
https://www.youtube.com/@code-with-vivek

6.1 — Introduction to File Handling

Learning Objectives

By the end of this lesson, you will:

- Understand what file handling is
- Know why files are used in real programs

Fill in the Blanks

1. File handling is used to store data _____.
2. Files help programs remember data even after _____.
3. Python supports file handling using the _____ function.

6.2 — File Input / Output

Common File Modes

Mode	Meaning
r	Read
w	Write
a	Append
r+	Read + Write
rb or wb	Binary read/write

Reading Files

Method	Description
read()	Reads entire file
readline()	Reads one line
readlines()	Reads all lines into list

Practice Exercise

Open notes.txt in read mode. Read and print the content. Close the file.

Write here

Writing Files

Method Description

write() writes content to file

Practice Exercise

Create a file named notes.txt. Write 3 lines of text into it. Close the file properly.

Write here

Common Mistakes

Forgetting to close the file
Using wrong file mode
Overwriting data accidentally

6.3 — Working with CSV Files

Concept

CSV stands for **Comma Separated Values**
Used widely for storing tabular data.

Example

```
import csv


with open("students.csv", "w", newline="") as file:
    writer = csv.writer(file)
    writer.writerow(["Name", "Marks"])
    writer.writerow(["Amit", 85])
```

Practice Exercise

Create a CSV file employees.csv. Add header: Name, Salary. Add at least 2 records.

```
# Write here
```

Key Takeaway

CSV files are ideal for spreadsheets and databases.

Reading CSV Files

Practice Exercise

Read employees.csv and print all rows.

Write here

Think & Answer

Why do we use csv module instead of normal file reading?

Write here

_____

6.4 — Working with JSON Files

Concept

JSON stands for **JavaScript Object Notation**
Used for structured data storage and APIs.

Example

```
import json


data = {"name": "Ravi", "age": 25}

with open("data.json", "w") as file:
    json.dump(data, file)
```

Practice Exercise

Create a dictionary with student details. Save it into student.json. Read and display the data.

```
# Write here
```

Practice Problems

Exercise 1

Write a program to:

- Take user input
- Save it to a text file
- Read and display it

Write here

Exercise 2

Create a CSV file to store:

- Product Name
- Price
- Quantity

Write here

Review Questions

1. Difference between text file and CSV file?

2. Difference between CSV and JSON?