ANSWER KEY

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

Fill in the Blanks — Answers

1. File handling is used to store data **permanently**.
2. Files help programs remember data even after **the program stops running / execution ends**.
3. Python supports file handling using the **open()** function.

6.2 — File Input / Output

Reading Files:

Practice Exercise — Sample Solution

```
file = open("notes.txt", "r")

content = file.read()

print(content)

file.close()
```

Writing Files:

Practice Exercise — Sample Solution

```
file = open("notes.txt", "w")

file.write("Line 1\n")

file.write("Line 2\n")

file.write("Line 3\n")

file.close()
```

Key Teaching Points

- w mode overwrites existing file
- \n is required for new lines
- Always close the file

6.3 — Working with CSV Files

Writing CSV Files:

Practice Exercise — Sample Solution

```
import csv


with open("employees.csv", "w", newline="") as file:
    writer = csv.writer(file)
    writer.writerow(["Name", "Salary"])
    writer.writerow(["Amit", 50000])
    writer.writerow(["Neha", 60000])
```

Teaching Notes

- Explain newline="" (prevents blank lines on Windows)
- CSV stores tabular data

Reading CSV Files:

Practice Exercise — Sample Solution

```
import csv


with open("employees.csv", "r") as file:
    reader = csv.reader(file)
    for row in reader:
        print(row)
```

Think & Answer — Expected Answer

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

A: The csv module automatically handles commas, rows, and data formatting, making CSV files easier and safer to read and write than manual string processing.

6.4 — Working with JSON Files

Practice Exercise — Sample Solution

```
import json


student = {
   "name": "Rahul",
   "age": 20,
   "marks": 85
}


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


with open("student.json", "r") as file:
   data = json.load(file)
   print(data)
```

Teaching Notes

- dump() → write to file
- load() → read from file
- JSON stores structured data

Practice Problems

Exercise 1 — Sample Solution

```
text = input("Enter text: ")
with open("user.txt", "w") as file:
    file.write(text)

with open("user.txt", "r") as file:
    print(file.read())
```

Exercise 2 — Sample Solution

```
import csv

with open("products.csv", "w", newline="") as file:
    writer = csv.writer(file)
    writer.writerow(["Product", "Price", "Quantity"])
    writer.writerow(["Pen", 10, 50])
    writer.writerow(["Notebook", 50, 20])
```

Review Question Answers

1. Difference between text file and CSV file

- Text file: plain unstructured data
- CSV file: structured tabular data

2. Difference between CSV and JSON

- CSV: row-column format
- JSON: key-value structured format