

## Lab\_07: Files

### Variants:

#### 1. File Reading:

- Write a program that opens a text file and prints its content.

#### 2. Line Count:

- Create a program that counts the number of lines in a text file.

#### 3. Word Search:

- Write a program that opens a file and searches for a specific word in its content.

#### 4. Text Replacement:

- Create a program that opens a file, replaces a specific word with another, and saves the changes.

#### 5. Word Statistics:

- Write a program that analyzes a text file and outputs statistics on the frequency of each word.

#### 6. Merge Files:

- Create a program that merges the content of two files into a new file.

#### 7. Line Deletion:

- Write a program that opens a file, deletes all lines containing a specific word, and saves the changes.

#### 8. Character Count:

- Create a program that counts the total number of characters in a text file.

#### 9. File Comparison:

- Write a program that compares the content of two files and outputs a message about their similarity or difference.

#### 10. JSON Reading:

- Create a program that opens a JSON-formatted file and prints its contents **in a readable format**.

#### 11. File Writing:

- Write a program that prompts the user for data and writes it to a text file.

#### 12. CSV File Creation:

- Create a program that generates a CSV file with data (e.g., a table with name, age, and address).

#### 13. File Copying:

- Write a program that creates a copy of an existing file.

**14. Log Analysis:**

- Write a program that analyzes a log file and outputs statistics (e.g., number of requests or errors).

**15. Binary File Operations:**

- Create a program that reads and writes data to a binary file.

**16. HTML Generation:**

- Write a program that creates an HTML file with data from Python (e.g., a table with results).

**17. XML Operations:**

- Create a program that reads and modifies data in an XML file.

**18. Data Filtering:**

- Write a program that opens a CSV file with data, filters it based on a specific criterion, and saves the result.

**19. Zip Archive Handling:**

- Create a program that archives multiple files into a zip file and extracts them.

**20. Object Serialization:**

- Write a program that serializes and deserializes Python objects using the pickle module.