Class 12 Computer Science Project

# Project Title: Simple Diary App with Password Protection

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## 1. About the Project

This project is a secure and simple diary application built using Python. It allows users to write, view, and export diary entries saved with timestamps. The application also simulates password protection, ensuring private access to personal entries. It helps students learn file handling, string formatting, and user authentication basics through a creative and practical use case.

## 2. Aim

To develop a password-protected diary application that records and retrieves user entries using file handling in Python.

## 3. Objectives

- To practice file operations using text files in Python  
- To use date and time for auto-stamping entries  
- To simulate password protection  
- To allow viewing and exporting specific entries  
- To apply string handling and conditionals in a meaningful context

## 4. Tools Used

• Python 3  
• Text File Handling  
• datetime module  
• String functions

## 5. Algorithm

Step 1: Ask the user for a password to authenticate  
Step 2: If password is correct, show the main menu  
Step 3: For a new entry, get input and add a timestamp  
Step 4: Save the entry in 'diary.txt'  
Step 5: Allow viewing entries by date (e.g., YYYY-MM-DD)  
Step 6: Allow exporting an entry to a separate file  
Step 7: Repeat until the user exits the program

## 6. Sample Output (Text Format)

--- Diary Menu ---  
1. Write a new entry  
2. View entries by date  
3. Export entry to file  
4. Exit  
  
[2025-06-02 21:10]  
Attended my first AI workshop today. Very inspiring!  
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## 7. Conclusion

This project demonstrates how a basic text-based application can simulate real-world functionality. By integrating password checks, timestamping, and export features, the project gives a hands-on experience in working with text files and Python’s standard libraries.