



OXZON.AI

AI/ML Interns Weekly Plan

Python Learning Map - Week 03

Week 03 - Mini Projects

Day 1

User Story - 0011 - Project 1 Personal Budget Tracker

- **Objective :** Help users track their income and expenses.
- **Key Concepts**
 - Lists and dictionaries for storing transactions.
 - Basic arithmetic for calculating totals.
 - File handling for saving and loading data.
- **Features**
 - Input income and expenses with categories.
 - Calculate total income, total expenses, and balance.
 - Save the budget history to a file and load it at the start.
- **Bonus**
 - Add date and time tracking for each transaction.

Day 2

User Story - 0012 - Project 2 Quiz Game

- **Objective :** Create a quiz with multiple questions and track the score.
- **Key Concepts**
 - Conditionals and loops for question flow.
 - Dictionary or list to store questions and answers.
 - Functions for modular code.
- **Features**
 - Define multiple-choice questions with correct answers.
 - Track and display the user's score at the end.

- **Bonus**
 - Randomize the order of questions or implement a timer for each question.
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Day 3

User Story - 0013 - Project 3 Simple Password Generator

- **Objective :** Generate strong, random passwords.
 - **Key Concepts**
 - String manipulation and random library.
 - Lists and loops for character selection.
 - **Features**
 - Input desired password length.
 - Include letters (uppercase and lowercase), numbers, and special characters.
 - Display the generated password.
 - **Bonus**
 - Option to specify requirements (e.g., at least one uppercase letter, one number, etc.).
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Day 4

User Story - 0014 - Project 4 To-Do List Application

- **Objective :** Create a task management tool.
 - **Key Concepts**
 - Lists for storing tasks.
 - File handling to save and load tasks.
 - Basic user interface (CLI).
 - **Features**
 - Add, remove, and mark tasks as completed.
 - View current tasks with status.
 - Save tasks to a file and load them when the app starts.
 - **Bonus**
 - Add due dates for each task and sort tasks by due date.
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Day 5

User Story - 0015 - Project 5 Simple Weather Reporter (API Integration)

- **Objective :** Fetch current weather data using an API (e.g., OpenWeatherMap).

- **Key Concepts**
 - HTTP requests and JSON parsing.
 - String formatting and conditionals for output.
 - Error handling for API response.
- **Features**
 - Input a city name and retrieve current weather details (temperature, humidity, description).
 - Display the results in a readable format.
- **Bonus**
 - Allow the user to search multiple cities consecutively or save recent searches.

Thank You