

## **Documentation**

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## **Introduction**

This documentation explains the development process of our group project, focusing on how we planned, coded, tested, and completed the program. It highlights the collaboration among members and how each contributed to core programming requirements such as the main menu, conditionals, loops, lists, and functions.

## **Planning and Brainstorming**

We began the project by brainstorming different ideas and choosing a concept that matched the guidelines. Our goal was to start early and create a program that demonstrated the major lessons in programming. After discussing our ideas and conducting initial research, we agreed on the final project idea and outlined the main features our program would include.

## **Research and Preparation**

Before coding, each member reviewed lessons related to Python programming, including conditionals, loops, functions, and data structures such as lists. We also researched examples and references to ensure we understood how to apply these concepts correctly in our program.

This preparation allowed us to approach the coding stage with confidence and a clear understanding of what had to be done.

## Task Distribution

After finalizing the project idea, we assigned the tasks based on the required programming components:

- **Main Menu / Main Program** – The structure that guides the user, handles inputs, and connects all features of the program.
- **Conditionals** – Responsible for creating decision-making parts of the program (if-else statements) based on user choices.
- **Loops** – Handles repeating actions, menu repetition, and continuous program flow.
- **Lists** – Manages collections of data, storing multiple values, and displaying or modifying them when needed.
- **Functions** – Organizes the program into reusable sections, improves readability, and makes the code easier to test.

Even though each member had a specific task, we continued to support one another to ensure the program worked smoothly as a whole.

## Development and Coding Process

The development stage involved integrating all the assigned parts into one complete program.

- The **main menu** was coded first to serve as the central navigation system.
- The **conditionals** were added to allow the program to react differently depending on the user's input.
- **Loops** were implemented to make the program repeat options, validate user input, and keep the program running until the user chooses to exit.
- **Lists** were used to store data dynamically and display them when needed.
- **Functions** were created to organize tasks into clean, reusable sections, preventing repeated code and improving overall structure.

Each component had to be connected properly so that the entire program functioned smoothly.

## **Debugging and Revisions**

During coding, we encountered several issues such as incorrect outputs, logic errors, menu looping problems, and list values not updating properly. These were solved through:

- continuous testing,
- rewriting parts of the code,
- checking indentation and syntax,
- reviewing logic flow, and
- asking help from group members when stuck.

Through multiple rounds of debugging and refinement, we were able to correct errors and improve the efficiency of the program.

## **Teamwork and Collaboration**

Despite having individual responsibilities, we worked closely as a team. We communicated through messages and quick discussions, reviewed each other's code, and combined all parts carefully. If someone encountered a difficult error, others stepped in to help. This shared effort ensured that our final program worked properly and stayed true to the project requirements.

## **Finalization**

Once all program components were complete and stable, we finalized the layout, cleaned the code, and tested the entire program multiple times. We checked the main menu, validated user inputs, tested loops, verified list updates, and ensured all functions were properly linked.

The final program was fully functional and ready for submission.

## **Conclusion**

The project strengthened our understanding of fundamental programming concepts, main menus, conditionals, loops, lists, and functions. Through teamwork, communication, and continuous debugging, we were able to complete a functional program and overcome the challenges we encountered. The experience taught us the value of collaboration and careful planning in coding projects.

## PHOTOS TAKEN

