Assignment 5: Final Product with Security by Design (SBD)

Project Information

Project Name	Team ID	Mentor(s)
Pi Vision	31	Niek Aukes & Lucas Pruijssers

Reflection Questions

What is one major security improvement or control you added to your project, and why was it important? (E.g., authentication, encryption, input validation)

Our project included a range of security and controls, which ranged from Authentication to database encryption. We have discussed together and, in accordance with the group, we believe that the major security improvement made in our implementation is the hashing of user information (or Encryption of Database). We value this as an essential security improvement because we are storing valuable user information which allows them to access their accounts and use the program. Protecting them is our main concern as we want to ensure every user a safe and pleasant experience, without any undesired and/or dangerous change. We also want to dedicate an honorable mention to our Blacklist implementation, which protects against Code Injection and Malicious Plugs-In, also fundamental to ensure user security and correct system functionality.

What was one challenge or issue you encountered during testing, and how did you resolve it?

We didn't encounter specific problems related to the implementation or the process of testing. Both manual and Unit Tests showed the expected results and worked correctly. However, one of the main issues we have was to familiarize ourselves with the Python Unit Test library, the *unittest* library. Since, compared to the Unit Test libraries we usually used (e.g. JUnit), it has a different syntax but a similar logic, we had to first spend some time understanding and familiarizing with the syntax of it, and later we tried to implement the tests ourselves. After such a step, completing the remaining Unit Tests was easier and faster.

Team Member Name	Reviewed Document (✔)	Date Reviewed	AI Tools Used (Yes/No)	If yes, Specify How Used
Bas Mulder	✔	03/11/'25	No	No AI tools used during this sprint/ for this assignment.
Daniel Sazykin	✔	03/11/'25	No	No AI tools used during this sprint/ for this assignment.
Kapllan Sheno	✔	03/11/'25	No	No AI tools used during this sprint/ for this assignment.
Mirko Troise	✔	03/11/'25	No	No AI tools used during this sprint/ for this assignment.
Paul Mandaag	✔	03/11/'25	No	No AI tools used during this sprint/ for this assignment.
Rick Arentsen	✔	03/11/'25	No	No AI tools used during this sprint/ for this assignment.

Quick Checklist

Item	Completed (✔)	Comments (optional)
1. Requirements and Design completed and reviewed	✔	
2. Security mechanisms identified and applied	✔	
3. Unit and manual testing completed	✔	
4. Vulnerabilities found and mitigation plans implemented	✔	
5. Team reviewed AI tool usage and documented it	✔	