Şükran Şafak Barutçu 20190808003
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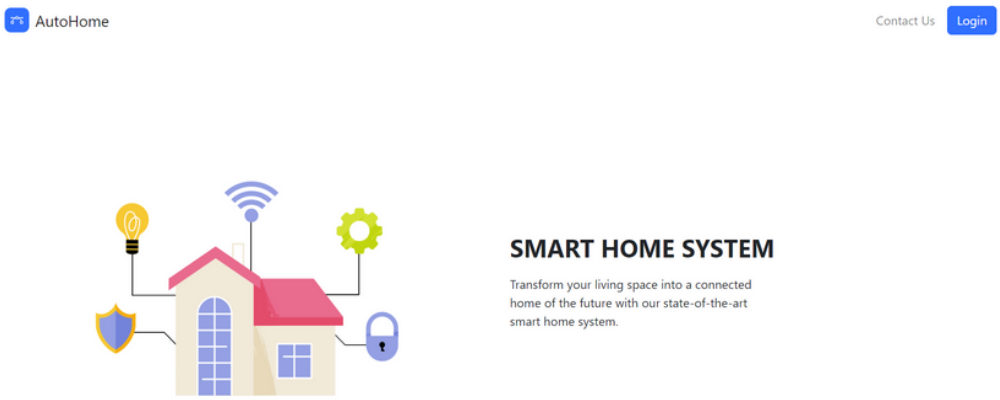
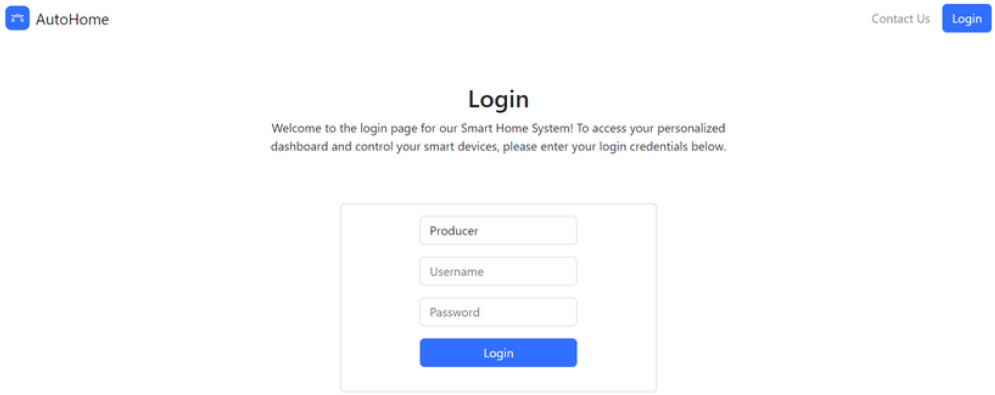
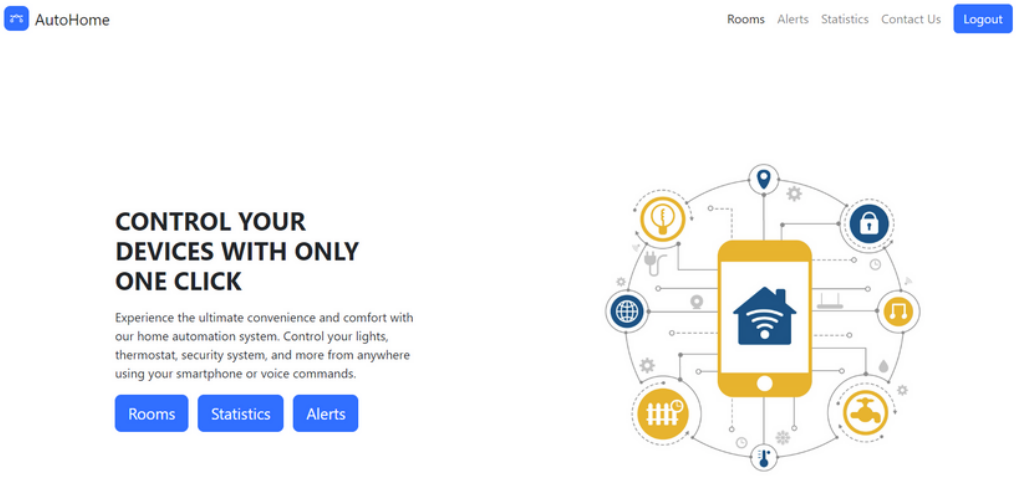
Web Automation System Final Report

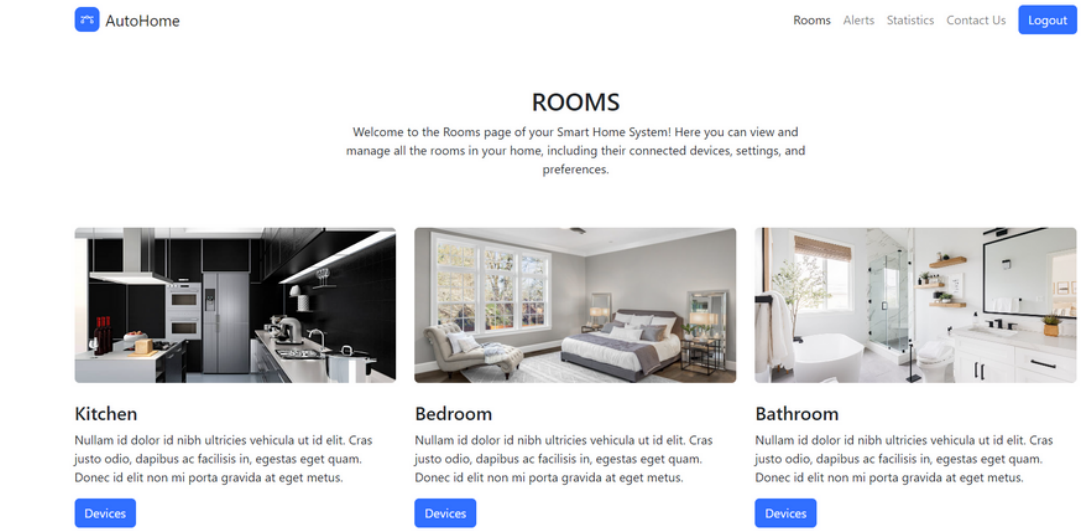
Screenshots

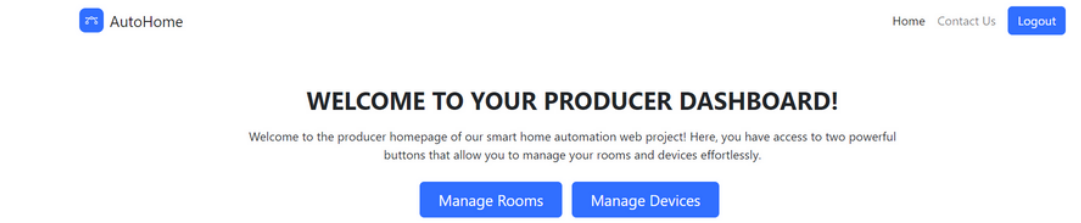


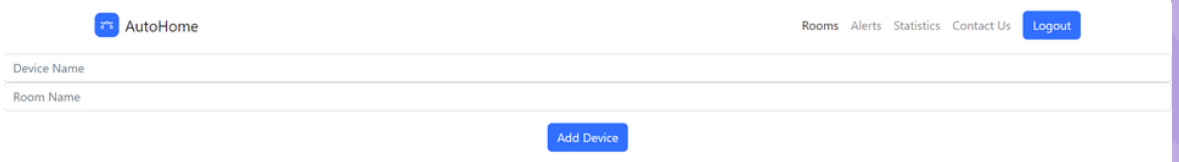


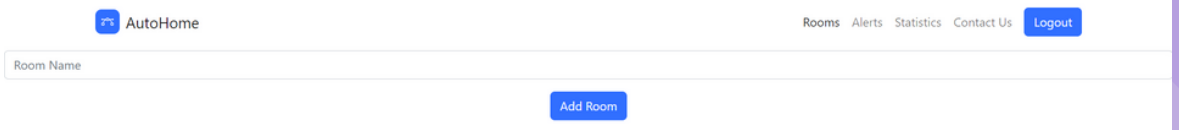


Screenshots

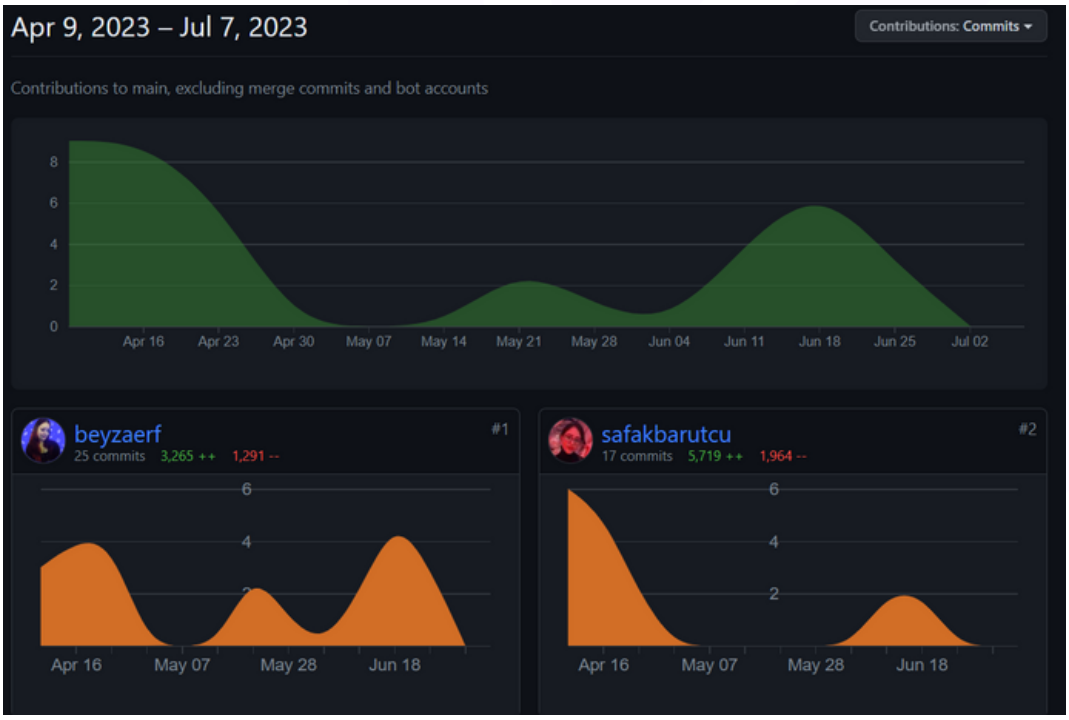


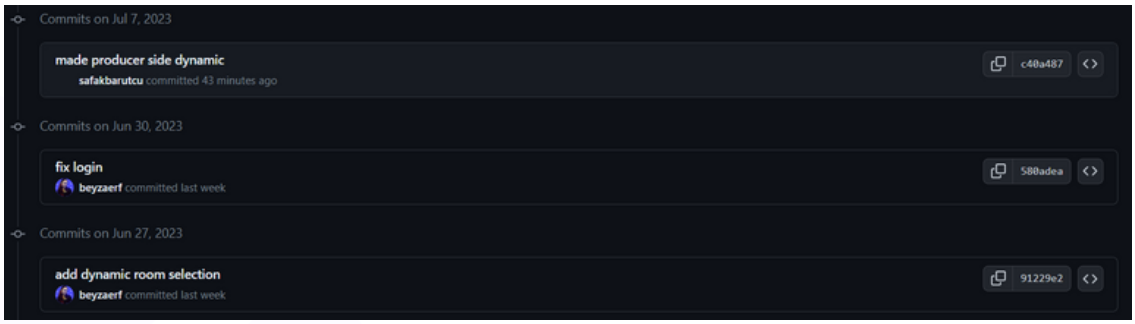


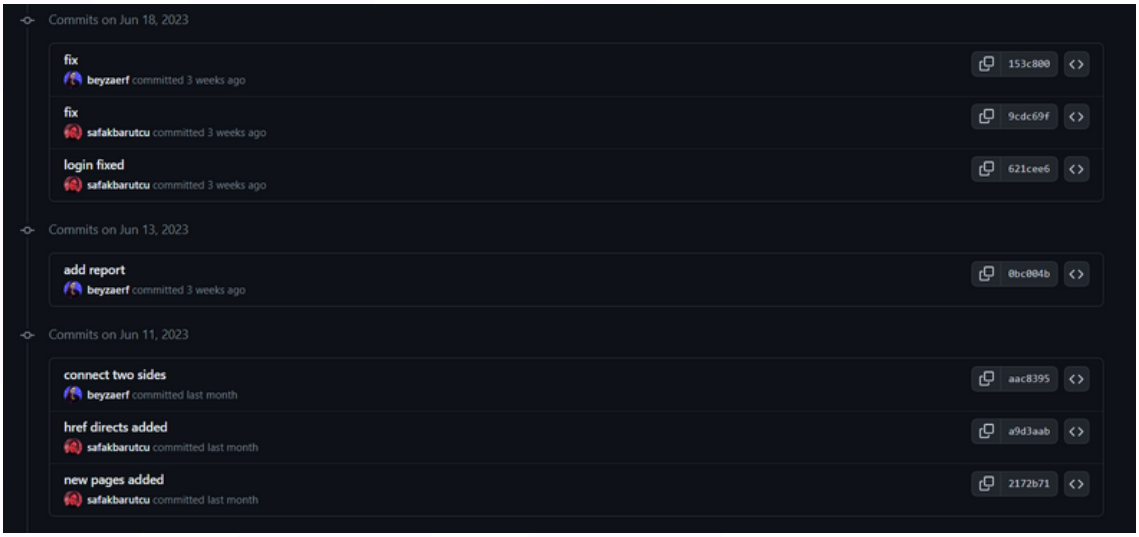




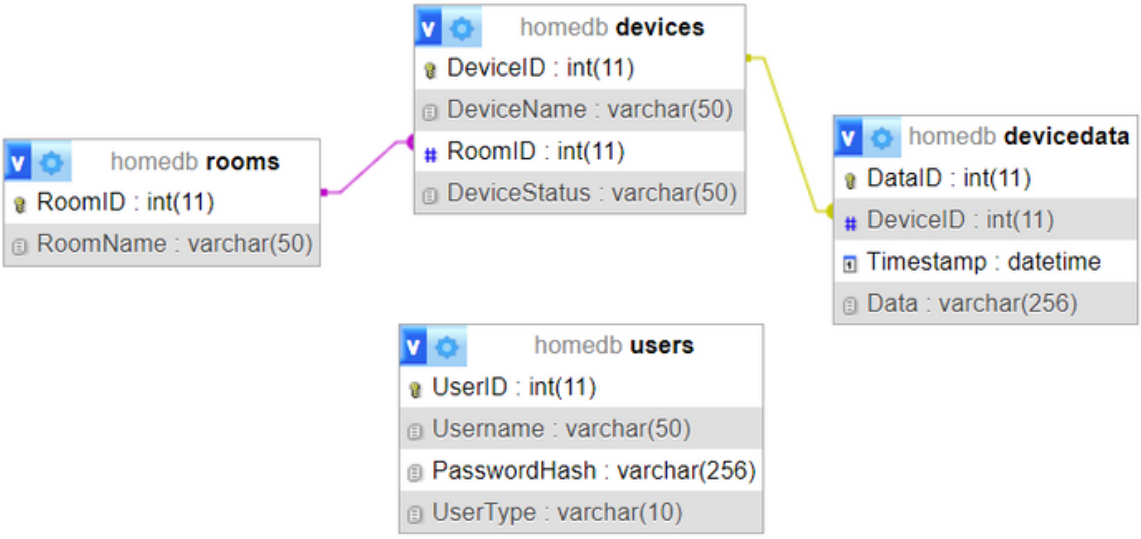
Git Insights







Database ER Diagram



What is done for security?

- For security, user passwords are stored securely in the database using a hash method instead of plain text. This means that passwords are converted into an encrypted string using a one-way hash function. Even if the database is compromised, the hashed passwords cannot be decrypted. This protects the users' passwords and accounts.

- Additionally, we ensure that each user can only access and control their own home automation system. Each user is only granted access to the rooms, devices, and data associated with their account. They cannot view or control any resources belonging to other users. This prevents unauthorized access and protects users' privacy and security.

UI Design Principles We Considered

Consistency: We maintained consistency throughout the user interface by using standardized design elements, such as color schemes, typography, and iconography. This consistency helps users navigate the system easily, as they can anticipate the behavior of familiar elements.

Simplicity: We embraced simplicity in our design to avoid overwhelming the users. By using clean and minimalistic layouts, we focused on essential information and functionalities, reducing clutter and cognitive load. For example, we utilized a straightforward navigation menu and intuitive icons for easy comprehension.

Responsiveness: Our user interface is designed to be responsive and adaptable to different screen sizes and devices. Whether accessed on a desktop, tablet, or mobile phone, the interface maintains its usability and functionality, ensuring a consistent experience for all users.

Visual Hierarchy: We implemented a clear visual hierarchy to prioritize important elements and guide users' attention. By using appropriate typography, color contrast, and size variations, we ensured that essential information, such as device statuses and alerts, stands out and is easily noticeable.

Feedback From a Third Party

As part of our Smart Home Automation System project, we sought feedback from a third party to gain insights and perspectives on our user interface and overall system functionality. The feedback provided valuable observations and recommendations for further improvements. The third party praised the project's intuitive user interface design, highlighting the consistency and simplicity that made it easy to navigate. They commended the responsiveness of the interface across different devices and appreciated the clear visual hierarchy that guided their attention to important information. Based on their suggestions, we made refinements to enhance certain aspects of the user interface and fine-tune the system's functionalities. Overall, the feedback from the third party validated our design choices and provided valuable insights to ensure the Smart Home Automation System meets user expectations and delivers an exceptional user experience.

Workflow

Producer Side:

- The user accesses the producer homepage.
- The homepage features two buttons: "Manage Rooms" and "Manage Devices".
- Clicking on the "Manage Rooms" button directs the user to the room management page.
- On the room management page, the user can view existing rooms, add new rooms, and remove existing rooms.
- The user can customize each room and assign smart devices to them.
- Clicking on the "Manage Devices" button directs the user to the device management page.
- On the device management page, the user can view existing devices, add new devices, and remove existing devices.
- The user can also control the values of each device (e.g., temperature, on/off status).

Consumer Side:

- The user accesses the consumer dashboard.
- The dashboard displays the rooms and devices.
- The user can view the real-time data of each device within the respective rooms.
- The Alerts page shows the user the recent changes made and timestamps stored in the database.
- The Statistics page allows the user to view device-specific statistics.