# DBMS-2006 Final Project Milestone One Project Proposal

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Project Name: Smart Home Automation System

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1. Project description:

The Smart Home Automation System integrates and automates various home devices, offering users a centralized platform to control lighting, heating, security, and entertainment systems. This system enables users to manage their smart home devices through a mobile app or voice commands, set automated schedules, and receive alerts for any unusual activity.

The project was chosen due to the rapid advancement in smart home technology and the increasing demand for solutions that enhance convenience, security, and energy efficiency in homes.

1. Business Case

Write one or two paragraphs describing:

Why is this project needed?

* + The project is needed because of the growing adoption of smart home devices, which often come with separate apps and interfaces, leading to inefficiency and user frustration. The Smart Home Automation System provides a unified, user-friendly interface to simplify the management of these devices.

Who is the target audience?

The target audience includes homeowners, tech enthusiasts, and property developers who wish to integrate smart technology into their projects. Moreover, incorporating engaging and unique design elements can make the user interface more appealing and memorable, thereby enhancing user experience.

1. Business Rules/Assumptions
   * A home can have multiple smart devices connected to the system.
   * Each device can be controlled individually or as part of a group.
   * Users can create automated schedules for devices based on time or events.
   * Security alerts are sent to users in real-time for immediate action.
   * Devices can be integrated from various manufacturers through APIs.
   * Special events or themes can be incorporated into the app to enhance user interaction.
2. Entity Relationship Diagram

[ Using a diagramming tool of your choice, create the ERD diagram. Be sure to include meaningful field names and that your PK’s and FK’s identified.   
 Remember every table needs a primary key and every relationship line needs a verb describing the relationship line. Paste a screenshot below.

A screenshot of a computer

Description automatically generated

When you review the ERD with your instructor you will be asked the following. Open the ERD in the program you created it in.

* + - Describe each entity and how they relate to each other in both directions.
    - Describe the symbols used on each line.
    - If there were any bridge or joiner tables created
    - Explain why the table was created.
    - Explain what PK was created for the joiner/bridge table and what makes it a good primary key.
    - Explain FK’s in the bridge table and their purpose

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**NOTE:** Students are not permitted to have a project based on an academic environment *(students, courses, books, instructors....)*. Project must be unique and cannot be anything that was used in this or previous courses.