

PROJECT PROPOSAL Embedded System LAB



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**BAHRIA UNIVERSITY, (Karachi Campus)**

*Department of Software Engineering*

PROPOSAL

**Course Title:** Software Construction **Course Code**:

**Course Instructor:** Dr Qamar  **Class**: BSE-5(B)

**Lab Instructor:** Engr. Ismail  **Date: 04/12/2023**

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| ***PROJECT TITLE:***  **IOT BASED HOME AUTOMATION SYSTEM** |
| ***GROUP MEMBERS LIST:***  **Aiman Zia Satti (02-131212-028)**  **Kanwal Shehzadi(02-131212-027)** |
| ***PROJECT SCOPE:***  The scope of this proposal is to design and implement an Internet of Things (IoT)-based home automation system with a focus on advanced lighting features. The system will leverage voice-controlled technology for seamless and hands-free management of lighting within the home environment. Manual control options will also be integrated, allowing users flexibility in their interaction with the system. |
| ***PROJECT ABSTRACT:***  In the realm of IoT, the concept of smart homes is revolutionizing how we interact with our living spaces. This proposal presents an IoT-based home automation system that specifically targets lighting control. By incorporating voice sensors and manual controls, this system aims to provide users with a versatile and intelligent solution for managing their home lighting efficiently. |
| ***PROJECT FUNCTIONALITIES:***  **(1) VOICE RECOGNITION:**  Implement state-of-the-art voice recognition technology to interpret user commands related to lighting control.  **(2) MANUAL CONTROL OPTIONS:**   * **MOBILE APPLICATION:** Develop a user-friendly mobile application that allows manual control of lighting settings. This app should provide an intuitive interface for users to customize and adjust lighting according to their preferences. * **PHYSICAL SWITCHES:** Integrate physical switches with the IoT system to offer traditional manual control. These switches should communicate with the central system to ensure synchronization with other control methods. |
| ***CONCLUSION:***  This proposed IoT-based home automation system offers a sophisticated and user-friendly solution for lighting control. By combining voice sensors with manual controls, users can enjoy a seamless and customizable experience, enhancing both convenience and energy efficiency within their homes. The integration of IoT technologies ensures a robust and scalable platform for the smart homes of the future. |
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**Teacher Signature**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Remarks**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Submission Date**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_