# Project Design Phase-II
# Data Flow Diagram & User Stories

| Date | 07 MAY 2023 |
|------|-------------|
| Team ID | NM2023TMID09640 |
| Project Name | IoT Based Weather Adaptive Street Lighting System |
| Maximum Marks | 4 Marks |

**Data Flow Diagrams:**
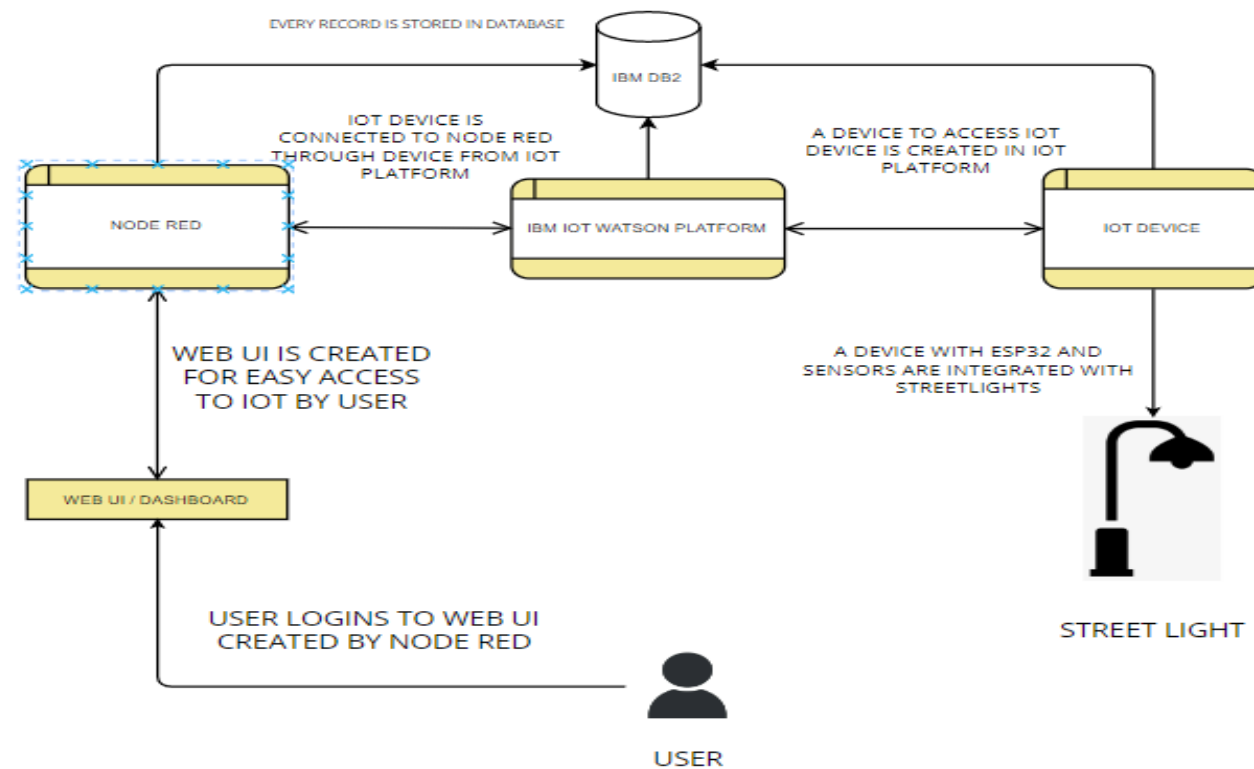
**User Stories**

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Team Member |
|---|---|---|---|---|---|---|
| Pedestrian | The system should automatically turn on/off the streetlights based on the weather condition and time of the day. | USN-1 | As a pedestrian, I want the streetlights to be on when it's dark outside and off during the day. I also want the streetlights to adjust their brightness based on the weather condition. | The streetlights should turn on at sunset and turn off at sunrise. The brightness should adjust based on the weather condition, such as brighter during heavy rain or snow, and dimmer during clear skies. | High | ADITHYA N |
| Municipal Government | The system should provide real-time weather data and street lighting status for monitoring and maintenance purposes. | USN-2 | As a municipal government staff, I want to access real-time weather data and street lighting status information through a web-based dashboard. I also want to receive notifications when there are any issues with the street lighting system. | The web-based dashboard should display real-time weather data and street lighting status information. The notifications should be sent via email or SMS when there are any issues with the system, such as a malfunctioning streetlight. | Medium | DINESH KUMAR P |
| Maintenance Staff | The system should provide remote access and control of the street lighting system for maintenance purposes. | USN-3 | As a maintenance staff, I want to be able to access and control the street lighting system remotely using a mobile app or web interface. I also want to be able to troubleshoot any issues with the system remotely. | The mobile app or web interface should allow the maintenance staff to turn on/off individual streetlights, adjust the brightness, and troubleshoot any issues remotely. The maintenance staff should be able to access the system securely using their login credentials. | High | GUGANESHRAJ S |

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|---|---|---|---|---|---|---|
| Environmental Activist | The system should use energy-efficient LED bulbs and reduce light pollution to protect the environment. | USN-4 | As an environmental activist, I want the street lighting system to use energy-efficient LED bulbs and minimize light pollution. I also want the system to turn off the streetlights during certain hours to conserve energy. | The street lighting system should use energy-efficient LED bulbs and minimize light pollution by directing the light downwards. The system should turn off the streetlights during certain hours when there is less pedestrian traffic to conserve energy. The system should also comply with local regulations on light pollution. | Low | MAGESH S |
| City Administrator | Monitor and manage street light energy consumption | USN-5 | As a City Administrator, I want to monitor the energy consumption of street lights in real-time, so that I can optimize their usage and reduce energy costs. | The system should display the energy consumption of each street light in real-time. The system should generate alerts when energy consumption exceeds predefined thresholds. The system should allow the City Administrator to adjust the brightness of street lights based on energy consumption data. | High | ARUNKUMAR M |