**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 03 October 2022 |
| Team ID | B7-1A3E |
| Project Name | Smart Waste Management System for Metropolitan Cities |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| --- | --- | --- |
| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Detect Dustbins Volume | Taking sensor reading from the Ultrasonic and weight sensor |
| FR-2 | Data Transfer | The data collected from the sensors are pushed to IBM cloud |
| FR-3 | User access | Concerned authorities should be able to access the webpage regarding bins status and location |
| FR-4 | SMS alert | Once the garbage bin fulfils the condition for garbage collection when it reaches certain level, SMS alert should be sent to garbage collectors |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The web application requires a user-friendly user interface while makes it convenient for the user to use. |
| NFR-2 | **Security** | The web application can be only accessed by  Authorised user. |
| NFR-3 | **Reliability** | The application should always be reliable and allow for information streaming to the concerned authorities. |
| NFR-4 | **Performance** | The application must be designed such that it has a quick response time, including page load  and refresh time. |
| NFR-5 | **Availability** | IOT device integrated smart dustbin must be cheap and easily available. |
| NFR-6 | **Scalability** | Smart dustbin and the application can be used in large scale |