Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 12 October 2022 |
| Team ID | PNT2022TMID41935 |
| 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 | **User Registration** | User able to register an account with email, password  and confirm password. |
| FR-2 | **Login** | User able to login into the system with email and password.  The system shall display error message if the user enters wrong information. |
| FR-3 | **Display Map Views** | User able to see the map views.  The system require user to enable GPS. User able to see the dustbins’ location. User able to see the dustbin’s status.  The system allows user gets the route direction from  user’s current location to dustbin’s location. |
| FR-4 | **Logout** | User able to logout the system. |
| FR-5 | **Detect Dustbins’ Volume** | The sensor shall detect the distance of dustbin and calculate in term of volume.  The system able to update the dustbins’ status to real- time database. |

# 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 system can be accessed via internet.  The system can be used in any android devices. |
| NFR-2 | **Security** | The system can be only accessed by registered email  and password. |
| NFR-3 | **Reliability** | A reduction in the number of waste collections needed by up to 80%, resulting in less manpower,  emissions, fuel use and traffic congestion. |
| NFR-4 | **Performance** | The system can be accessed within 24 hours per day  and 365 days per year. |
| NFR-5 | **Availability** | the Availability of resources and the environmental conditions of a given society is essential for the  development of an appropriate waste management system. |

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| NFR-6 | **Scalability** | Garbage level can be Detected at any time and where if the garbage cause damage can be notified  to user. |