|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement ID** | **Use Case ID** | **High Level Design Element** | **Low Level design Element-1** | **Low Level Design Element-2** |
| RQ-1 | 1 | Module 1 | C1,C6, C7 | M1 |
| RQ-2 | 2 | Module 1 | C2 | M2,M4 |
| RQ-3 | 3 | Module 1 | C2 | M3,M4 |
| RQ-4 | 4 | Module 1 | C3 | M6 |
| RQ-5 | 5 | Module 1 | C3 | M5 |
| RQ-6 | 6 | Module 1 | C4 | M10 |
| RQ-7 | 7 | Module 1 | C3 | M7 |
| RQ-8 | 8 | Module 1 | C3 | M8 |
| RQ-9 | 9 | Module 1 | C4,C6 | M11,M13,  M14 |
| RQ-10 | 10 | Module 1 | C5 | M12 |
| RQ-11 | 11 | Module 1 | C7 | M15 |

CLASSES DESCRIPTION

***Note:*** *All the classes are group under a* ***single module*** *named* ***Module 1***

|  |  |  |
| --- | --- | --- |
| **CLASS NAME** | **NOTATION** | **METHOD’S NOTATION** |
| Login | C1 | **M1**: Login( ) |
| Sensors | C2 | **M2**: moisture\_Data( ) **M3**: Ultrosonic\_sensor( )  **M4**: Send\_Data( ) |
| Dashboard  Authority | C3 | **M5**: Add\_Dustbin( ) **M6**: Add\_Van ( )  **M7**: Remove\_Dustbin( ) **M8**: Remove\_Van( )  **M9**: Logout( ) |
| Check data | C4 | **M10**: Analyse\_data( ) **M11**: messege\_sender( ) |
| Mail | C5 | **M12**: complaint\_mail( ) |
| Van Driver | C6 | **M13**: Collect\_message( ) **M14**: Clean\_dustbin( ) |
| User | C7 | **M15**: Monitor\_status( ) |

|  |  |  |
| --- | --- | --- |
| **USE CASE ID** | **USE CASE** | **DESCRIPTION** |
| 1 | Login | Authority/User/Van Driver can login their account. |
| 2 | Moisture report | Sensors will send moisture report to System. |
| 3 | Ultrasonic Sensor | Ultrasonic Sensor will send status of dustbin to system . |
| 4 | Van Registration | Authority can add new van |
| 5 | Dustbin Registration | Authority can add new dustbin. |
| 6 | Status Checking | System checks status of dustbin by data sent from sensors. |
| 7 | Remove Dustbin | Authority can remove old Dustbins. |
| 8 | Remove Van | Authority can remove old damaged vans. |
| 9 | Message Sender | System will send message to van driver if dustbin needed to be cleaned. |
| 10 | Complaint sender | A complaint email will be sent to higher authorities if dustbin is not cleaned in given time period. |
| 11 | Monitoring | An User can monitor the situation and condition of dustbin after logging in. |