

## Modules

### Admin

- Login
- Create Bin
- Update/Delte Bin
- Create Driver
- Update/Delte driver
- View Work Report
- view Complaints
- User details.

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### User

- Registration
- Login
- Register complaint
- complaint & status.

### Driver

- Login
- check daily updates.

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### Admin management module:

#### functionalities:

#### Bin management

- Create Bin : Admin can create new waste bins for various locations, specifying location bin type and capacity.
- Update/Delte Bin : Admin can update or remove bin information when required, ensuring accuracy in bin location data.

#### Driver management

- Driver creation : Admin can add new drivers entering relevant details such as name, contact, and vehicle information.
- Update/Delte driver : Admin can modify or delete driver profiles.

#### Complaint management

- View complaints : Admin can view all complaints registered by users.
- Update complaint status : Admin can update the complaint status based on the progress of the resolution process.

② Study about Splitting the project into different modules and its functionalities.

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### Task Assignment:

- Assign Tasks to Drivers: Based on complaints or bin status, the admin assigns tasks to drivers (e.g.: empty bins, resolving user issues).

### Working report monitoring:

- View Work Report: Admin can view work reports submitted by drivers after task completion, which include task details, location, and status.

### User management:

- View User Details: Admin has access to a list of all registered users, along with their information for managing user roles or addressing issues.

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### 2. User Management module:

#### Registration:

- User Registration: Users can sign up to the system by providing basic information such as name, contact and address.

#### Complaint management:

- Register Complaint: User can register complaints related to bin issues (Overflow, damaged bins, etc.).
- View Complaint Status: Users can track the progress and resolution status of their submitted complaints in real-time.

### 3. Driver Management Module.

#### Task Handling:

- Check Daily Updates: Can check daily updates (e.g., emptying bins, resolving specific complaints).
- Update Task Status: Drivers update the status of their assigned tasks (e.g., completed, pending), which is then visible to the admin.

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### Work Report:

- Submit Work Report : After completing the tasks, drivers submit a work report summarizing actions taken, allowing admins to monitor efficiency.

## 4. Complaint Management module.

### User side

Register Complaint : User submit their complaints regarding bin management issues through a simple form.

Tracks Complaint Status : User can view the current status of their complaints whether pending, in progress or resolved.

### Admin side

Complaint Overview : Admin has an interface to view all incoming complaints in an organized manner.

Status Update : Admin can update the status of each complaint as it's add by drivers.

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## 5. Task Assignment & monitoring module.

### Task Assignment

Assign Tasks to Drivers : Admin can assign specific tasks based on user complaints or bin maintenance needs.

Task Scheduling : Admin can schedule tasks for future dates or set recurring tasks.

### Generate Report :

## 6. Reporting and Analytics module.

Work Report : Admin can view & analyze

Complaint Report : Admin can generate no.of.com.

Bin Activity Report : " " monitor bin activity pending

## 7. Bin management module

### Bin Creation

Create Bin : Admin can add bins specify location.

### Update/Delete Bin :

Update : Admin can update bin details if bin relocated

Delete : " " delete bin entry if bin no longer in use or recycled permanently.

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Module D welcome

Ben Buster

homepage.

<a href="#">Home</a>	<a href="#">Login</a>	<a href="#">User Reg</a>
<a href="#">Admin</a>	<a href="#">User</a>	<a href="#">Driver</a>

**Admin Login**

<input type="text"/> Your Email	<input type="password"/> Password
<input type="button" value="Login"/>	

[Admin Login](#)

Home Login UserRegist

- Create Bin
- Update Bin
- Delete Bin
- Create Driver
- Update Driver
- Delete Driver

[View Complaint](#)   [View Work](#)   [User](#)   [Admin](#)

Report    Details    Logout

[Admin Home page](#)

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Home Login UserReg

**User Login**

<input type="text"/> Your Email	<input type="password"/> Your password
<input type="button" value="Login"/>	

[User Login](#)

Register complaint

Name :	<input type="text"/>
Area :	<input type="text"/>
Enter your complaint	
<input type="button" value="Register complaint"/>	

Home Login UserReg.

**My Complaints**

complaint ID : 1	
Area :	
complaint	
status :	

( User Home Page )

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**Driver Login**

Driver Email	Driver password
<b>Login</b>	

**MY Work**

Work ID : 1	Assigned Area
Delivery Period	Work Status
Completed	Dropped
<b>Homepage</b>	

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Master Table:Admin Table

Field Name	Data Type	Description
admin-id	INT (primary key)	Unique identifier for each admin.
name	VARCHAR (100)	Name of admin
email	VARCHAR (200)	Admin email address
password	(25)	Encrypted Password for login
contact-no	(15)	Admin contact no.
role	(50)	Role/designation of the admin.

User Table

Field Name	Date Type	Description
User-id	INT (pri key)	unique identifier for each user.
name	VARCHAR (100)	Name of the user
email	(100)	User email id
password	(25)	Encrypted PLS for login
contact-No	(15)	Contact no. of the user
registration-date	DATETIME	Date/time when the user registered
address	Text	Residential or corporate add.

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## 3. Driver Table

Field Name	Data Type	Description
driver-id	INT (Primary Key)	Unique identifier for each driver
name	VARCHAR(100)	Name of the driver
email	VARCHAR(200)	Driver's email address
password	CHAR(225)	Encrypted password for login
contact-no	VARCHAR(15)	Driver contact number
vehicle-no	" (50)	Vehicle assigned to the driver
assigned-area	CHAR(100)	The area assigned to the driver
status	VARCHAR(200)	Status (Active/Inactive)

## 4. Bin Table

Field Name	Data Type	Description
bin-id	INT (PK)	Unique identifier for each bin
location	VARCHAR(225)	Location of the bin
bin-type	(50)	Type of waste (domestic, commercial, medical, etc.)
capacity	FLOAT	Max capacity of the bin
current-fill-level	Float	Current fill level of the bin
status	VARCHAR(50)	Status (Empty, Half-full, Half-fail, overflow)
last-cleaned-date	DATETIME	Last date the bin was emptied

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## 5. Complaint Table

Field Name	Data Type	Description
complaint-id	INT (PK)	Unique identifier for each complaint
user-id	INT (FK)	Reference to the user who lodged the complaint
bin-id	INT (FK)	Reference to the bin the complaint is related to
complaint-text	TEXT	Detailed description of the complaint
status	VARCHAR(50)	Status (Pending, In Progress, Resolved)
created-date	DATETIME	Date when the complaint was registered
updated-date	DATETIME	Date when the complaint status was last updated

## 6. Task Table

Field Name	Data Type	Description
task-id	INT (PK)	Unique identifier for each task
driver-id	INT (FK)	Reference to the driver assigned to the task
complaint-id	INT (FK)	Reference to the complaint
bin-id	INT (FK)	Reference to the bin (bin empty task)
task-description	TEXT	Description of the task assigned
task-status	VARCHAR(50)	Status (Assigned, In Progress, Completed)

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assigned-date	DATETIME	Date the task was assigned.
completed-date	DATETIME	Date the task was marked as completed.

### 7. WORK Report Table

Field Name	Data Type	Description.
report-id	INT (PK)	Unique identifier for each report.
driver-id	INT (FK)	Reference to the driver who submitted the report.
task-id	INT (FK)	Reference to the task the report is related to.
report-text	TEXT	Summary of the work done.
report-date	DATETIME	Date the report was submitted.
status	VARCHAR(50)	Status (Pending, Approved).

#### Relationships :

- Admin, User, Driver tables are standalone but related to other tables through fk
- Complaint and Tasks tables relate to bin & User tables
- Work Report links to Task and Driver tables for tasks monitoring and status updates.

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### Admin Transaction Table

Field Name	Data Type	Description.
transaction-id	INT (PK)	Unique identifier for each transaction.
admin-id	INT (FK)	Reference to the admin performing the action.
action	VARCHAR(225)	Description of the action (Create, bin, update bin, etc.)
entity-type	VARCHAR(50)	Type of entity affected (Bin, driver, complaint).
entity-id	INT	Reference to the affected entity (bin-id, driver-id, etc.).
transaction-date	DATETIME	Date & time of the transaction.
details	TEXT	Additional information related to the action.

### User Transaction Table

Field Name	Data Type	Description.
transaction-id	INT (PK)	Unique identifier for each transaction.
user-id	INT (FK)	Reference to the user performing the action.
action	VARCHAR(225)	Description of the action (Create com, view status).

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Complaint-date	INT (PK)	reference to the complaint
Transaction-date	DATETIME	Date & Time of the action.
Details	TEXT	Additional Information about the action.

### 3. Derived Transaction Table

Field Name	Data Type	Description
Transaction-table	INT (PK)	Unique identifier for each transaction.
Driver-id	INT (FK)	reference to the driver performing the action.
Action	VARCHAR(225)	Description of the action (task update, report submission).
task-id	INT (FK)	Reference to the work task report being updated.
report-id	INT (FK)	Reference to the word report.
Transaction-date	DATETIME	Date and Time of the transaction.
Status	VARCHAR(50)	Current status (assigned, in progress, completed).
details	Text	Additional information about the action.

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### 4. Complaint Transaction Table.

Field Name	Data Type	Description
complaint-transaction-id	INT (PK)	Unique identifier for each Transaction.
complaint-id	INT (FK)	Reference to the complaint
User-id	INT(FK)	Reference to the user who submitted the complaint
admin-id	INT(FK)	Reference to the admin updating the complaint
action	VARCHAR(225)	Description of action (status update, reassignment)
Status	VARCHAR(50)	complaint status
Transaction-date	DATETIME	Date & Time of status update
details	Text	Additional information related to the complaint update.

### 5 Task Transaction Table

Field Name	Data Type	Description
task-transaction-id	INT (PK)	Unique identifier for each task transaction
task-id	INT (FK)	Reference to the task being tracked.

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driver-id	INT (FK)	Reference to the driver assigned to the task.
admin-id	INT (FK)	Reference to the admin assigning the task.
action	VARCHAR (225)	Description of the action (assigned, updated, completed).
status	VARCHAR (50)	Task status (Assigned, In progress, Completed).
transaction-date	DATETIME	Date and time of the action.
details	Text	Additional information related to the task.

## 6. WORK Report Transaction Table-

Field Name	Data Type	Description
report-transaction-id	INT (PK)	Unique identifier for each work report transaction.
report-id	INT (FK)	Reference to the work report.
driver-id	INT (FK)	Reference to the driver submitting the report.
task-id	INT (FK)	Reference to the task related to the report.

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action-id	VARCHAR (225)	Description of the action (report submitted, approved).
status	VARCHAR (50)	Work report status (Pending, Approved).
transaction-date	DATETIME	Date and time of the transaction.
details	Text	Additional information related to report.

## Process

### Module Description

#### Admin

- Login : In login page , admin can login to ~~GreenBuster~~ application .
- Create bin : Admin can create waste bin in various location .
- update / delete Bin : Admin can update and delete the details of waste bin created various location .
- Create driver : Admin can create driver .
- Update / delete Driver : Admin can update delete driver details .

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view work report : Admin can view work report of waste collection which is updated by drivers.

view complaints : Admin can view the complaints from public and update status of the complaint.

User details : Admin can view the user details.

## User

Registration : User can register to the application.

Login : User can login to the application.

Register complaint : User can view the status of the complaints.

View driver : and status : User can view the status of the complaints.

## Driver

Login : Driver can login to the application.

Check daily updates : Driver can check the work details and update the status of the work to the admin.

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## DFD. Data Flow Diagram.

→ Input → Process → Output  
Level 0

Level 0 - context diagram (project represent).

## Software

input

process

output

Boundary (scope)

Environment (domain) } level 0

○ - process

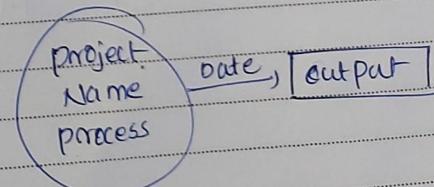
→ - flow

□ - data store

□ - entity (User environment extra communication)

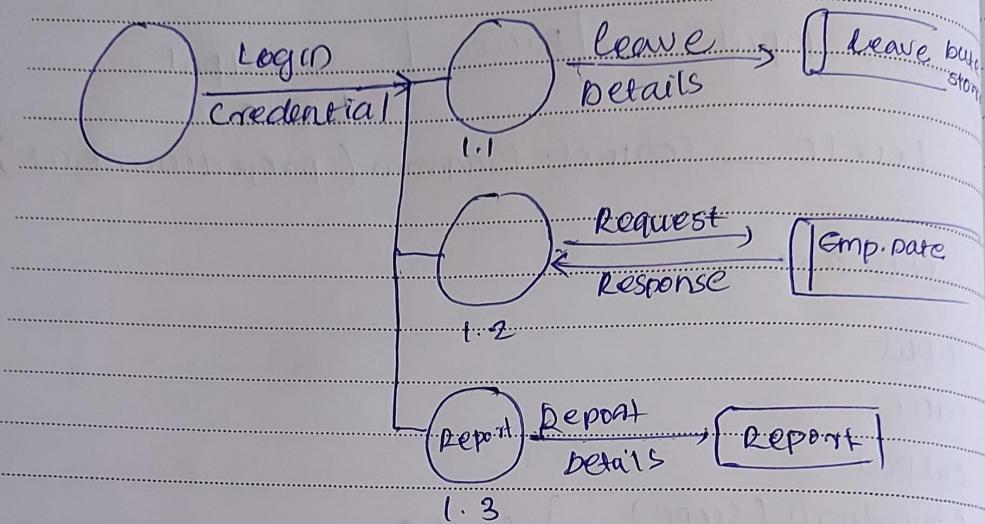
## Level 0

[User] → IP

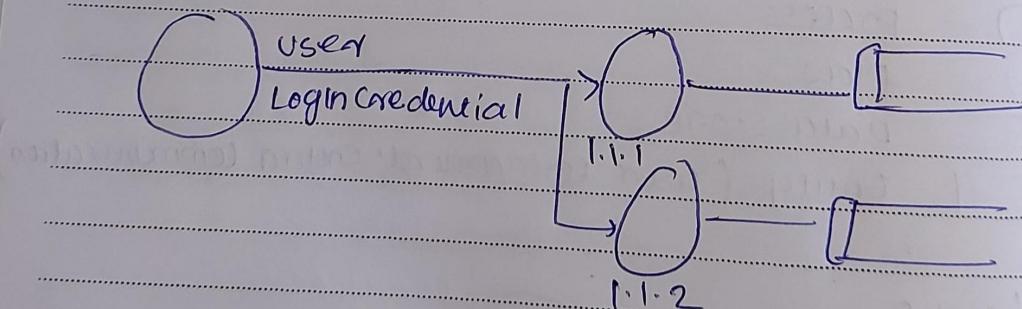


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### Level 1 - Context Delay

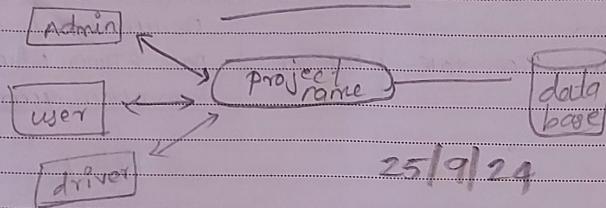


### Level 2 -

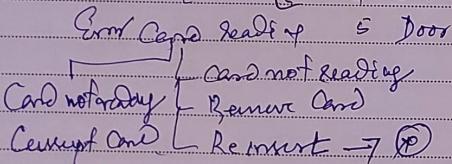
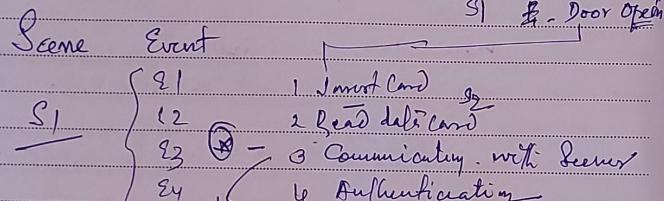


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DFD Level 0.

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Def

Scene

Cash Withdrawal  
ATM Operation

E1 - Opening the Door

E2 Operating the ATM Machine

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UML - As a Customer I want to make some operations in the ATM

No ID	User Agent	Action	Purpose
US-1	• Register	•	for collecting funds

User job history

- Registration - when I register I can become in participating application.

Various types of  
transaction from  
particular location.