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# SAFE WASTE

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**TEAM 47**

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# SAFEWASTE

## Technologies Used:

1. Flutter (Client Side)
2. Python (Server Side)
3. Sqlite3 (Server-side Database)
4. Flask (Web Server Framework)

Server and Database is deployed on localhost for quick development.

## FEATURES:

1. GAMIFICATION

It is human psychology to have the feeling of “being above others”.

To exploit this, the software provides points for different tasks. A leaderboard shows the users who have gained most points, which in turn induces greed in the user to gain the most points.

Points are distributed as:

Giving Ideas for Reducing Waste: 1

Reporting inappropriate dumping of waste: 2

Reporting Stores which use single use plastic: 3

However, we know that this feature can be misused by anyone, we have implemented negative points system. In this system if a user falsely submits a report, he must be punished by the authorities.

Reports can be also mistakenly reported, for that purpose, we have kept a threshold of 3 negative points after that the user will be punished by authorities as pre rules.

2. Crowdsourcing

‘Many Weaklings can perform a task together, which one strong person can’t do.”

Taking inspiration from this, following are the operations users can do:

**Giving Suggestions / Feedback:**

Diverse Ideas are helpful.

User can simply fill in a simple form having just two text fields, to submit his/her idea.

The Municipal Corp. or the related authority will take the suggestion into consideration

If it is useful in public welfare

**Reporting inappropriate dumping of waste:**

Many times waste is not recycled and just dumped in inappropriate, illegal places. To report such violations, the user can simply take a picture, provide the offender name, give the address as well as provide geo coordinates for quick action.

**Reporting Stores which use single use plastic:**

Single Use Plastic is disposable plastic that is not fully biodegradable.

Most retail stores use plastic bags to distribute their products instead of recyclable plastic,they don’t follow the rules.

In such a case, a user can simply report the stores name and address with the location.

3. User Friendly UI

The Client Side is a very light weight Android / IOS Applications.

The app has a simple login interface and one time signup interface if any new user has to register.

The user do not have to find for the features, app designed in such a way that the user can quickly report the incident in a matter of seconds

The app also has a DAY/NIGHT Feature, according to the time the background of the app changes to dark theme to protect user’s eyes

As this app development is done with flutter (Dart Programming), multiple variants of the app can be made even Web interface can be made from the same code.

4. **SQLite3 Database**

The Backend Processing Engine uses Python for processing and Sqlite3 Database for proper storage of the data instead of using the files system.

The Backend system is scalable and can be used for commercial use after some minor

Changes to the code.

Using the power of object oriented programming the code becomes easy to read and easy to implement, it saves time compared to procedure oriented Languages at the backend0

Flask, a State of the art Web Framework is taken into implementation for python backend to connect to the Android/IOS Client

SCREENSHOTS:

