

Project Report
On
E-WASTE MANAGEMENT

Submitted in partial fulfillment for the award of

Diploma in Advance Computing
from C-DAC Chennai



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1. Introduction of Project:

We have created an e-Waste web application where the user can sell different types of electronic waste.

Nowadays people face many difficulties while exchange, selling any e-waste material as they have to search many places or websites , which wastes a lot of time. The platform will provide sellers to sell those products by posting a sell request. User Interface, developed in React uses user email to authenticate and data is imported using REST. UI makes secure calls to Spring Boot. In the backend, JAVA is used to fetch and manipulate the data and usedMySQL as database.

The E-Waste is an application that allows users to sell various types of electronic Waste. Once the seller have given all the information, then admin will verify it and will allow or refuse the product. After request approval admin will send an agent to receive those products and the details of agent will be shared with the end-user. It provides facilities for adding, deleting, updating product request.

For all this a lot of API's is used for the ease of user. API allows two applications to talk to each other and then the application interprets that data and presents the user with the information the user wanted in a readable way.

For the login of users into this website we use the user email authentication, which allows users to sign up with their email. This platform is based on REST services and it tends to independency of all services. This platform is rapid and frequent due to this technique

2. Product Overview and Summary

1. Purpose:

The e-waste management system is now an online e-waste management website. Public will get the information about the e-waste material and aware others about it. We will collect the e-waste equipments from the sellers and it will be delivered to recycling companies with the help of agents.

2. Scope:

An e-Waste web application where the user can sell different types of electronic waste.

3. Overview:

Section 3.0, the Overall Description, provides an overview of the components and the relationship between them. Section 4.0 provides the Specific Requirements of the product. In the subsection (4.1) and (4.2) of which the various functional requirements and various interface respectively are discussed. Section 5.0 describes Database Design details.

4. Feasibility Study

Feasibility is determination of whether a projects worth doing or not. Before actually recommending the new system it is important to investigate if it is feasible to develop the new system.

Before developing and implementing a system we have sure that our system is feasible in the following ways:

➤ Technical Feasibility:

In the type of feasibility study, the system analyst has to check whether it is possible or not to develop the requested system with availability of manpower, software, hardware, etc. The system which we run in Linux as well as windows platform and hence are suitable for the end-user. The system is technically feasible because it does not require too many resources and runs with the browser. A proof of concept was implemented to verify the technical feasibility to retrieve data from various APIs.

➤ Operational Feasibility:

In this type of feasibility study the operation implementation of the system is considered. Checking is done regarding whether it is feasible for the users to use the application. Thus the proposed system is said to be operationally feasible only if the end users are able to understand the system clearly and correctly and can use the system with ease and with the minimum training.

3. Overall Description:

1. Product Features

The project's aim is to provide an e-Commerce website for plants which is containing java (platform independent), React, API's for user.

2. Technology Used

BACK END

Spring Boot Hibernate.
MYSQL for storage of data.

FRONT END

React
CSS
Bootstrap

Platform:
Web Development: J2EE Spring Boot, React, MySQL

J2EE Spring Boot

Spring Boot has been built for Rapid Application Development. The goal of Spring Boot is to provide a way to create Java applications quickly and simply, through an embedded server. By default, it used an embedded version of Tomcat and hence eliminating the need of Java EE containers.

It is a framework to ease the bootstrapping and development of new Spring Applications. Bootstrapping with defaults included in the configuration/ jar-dependencies. Easy to create standalone applications with embedded Tomcat/Jetty/Undertow. It provides defaults for code and annotation configuration to quick start new spring projects within no time. Plenty of Spring Boot Starter to quickly get up and running.

No code generation and no requirement for XML configuration. It reduces lots of development time and increases productivity.

React

React is a JavaScript library for building user interfaces. It has transformed the way we think about front-end development. React.js has clasped the engagement of the open-source community. And its demand is irreversible in the coming future. It is here to stay.

Improved performance: React uses Virtual DOM, thereby creating web applications faster. Virtual DOM compares the components' previous states and updates only the items in the Real DOM that were changed, instead of updating all of the components again, as conventional web applications do.

MySQL

MySQL is an open-source relational database management system (RDBMS). A list of commonly used MySQL queries to create database, use database, create table, insert record, update record, delete record, select record, truncate table and drop table etc. MySQL is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications.

The most common use for MySQL, however, is for the purpose of a web database. It can be used to store anything from a single record of information to an entire inventory of available products for an online store. In association with a scripting language such as PHP or Perl (both offered on our hosting accounts) it is possible to create websites which will interact in real-time with a MySQL database to rapidly display categorized and searchable information to a website user.

3. User Classes

There is two type of user which can access this website. One is customer and the second one is ADMIN which will manage the users, products and requests.

4. General Constraints

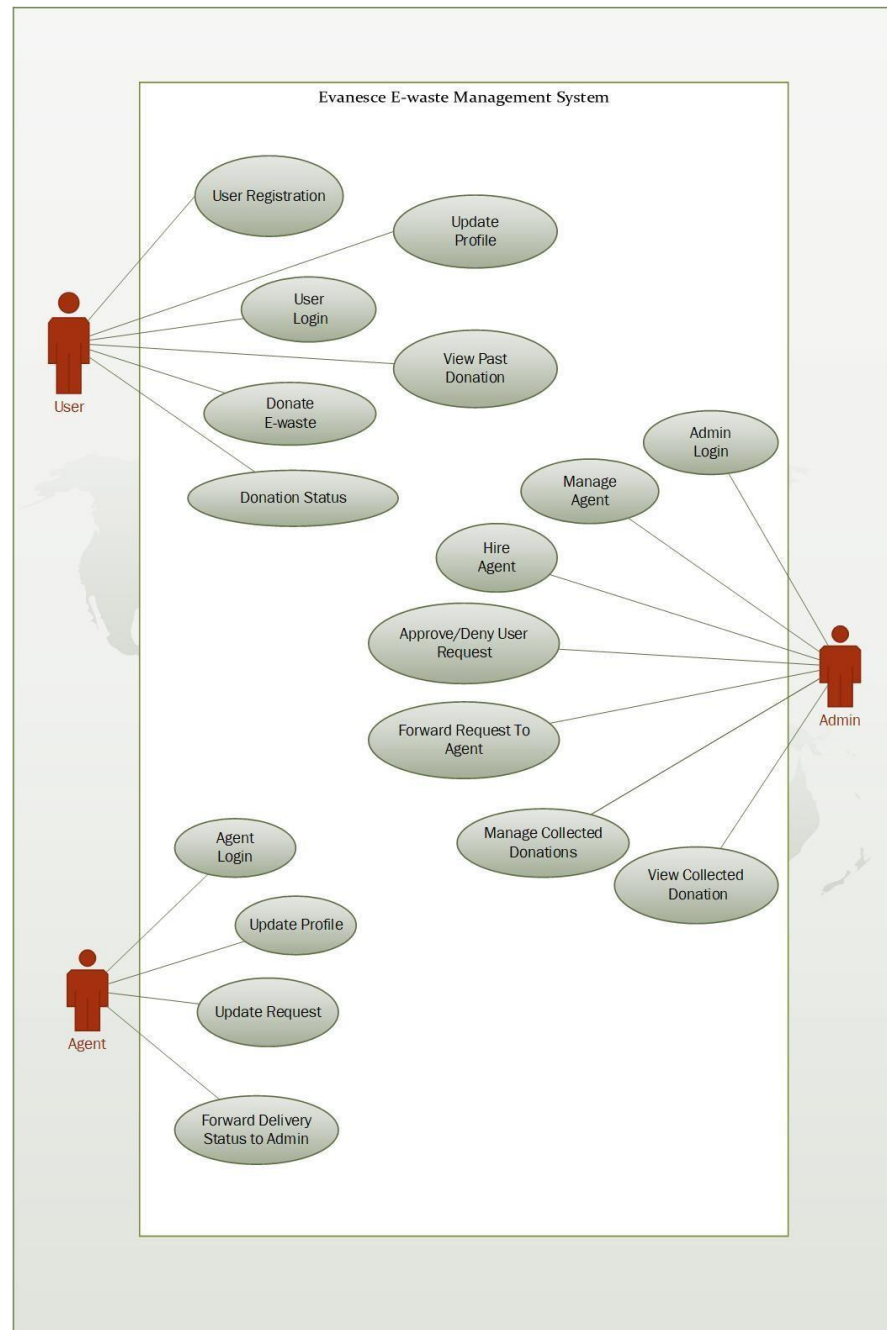
Users must have an email and have a browser

4. REQUIREMENTS

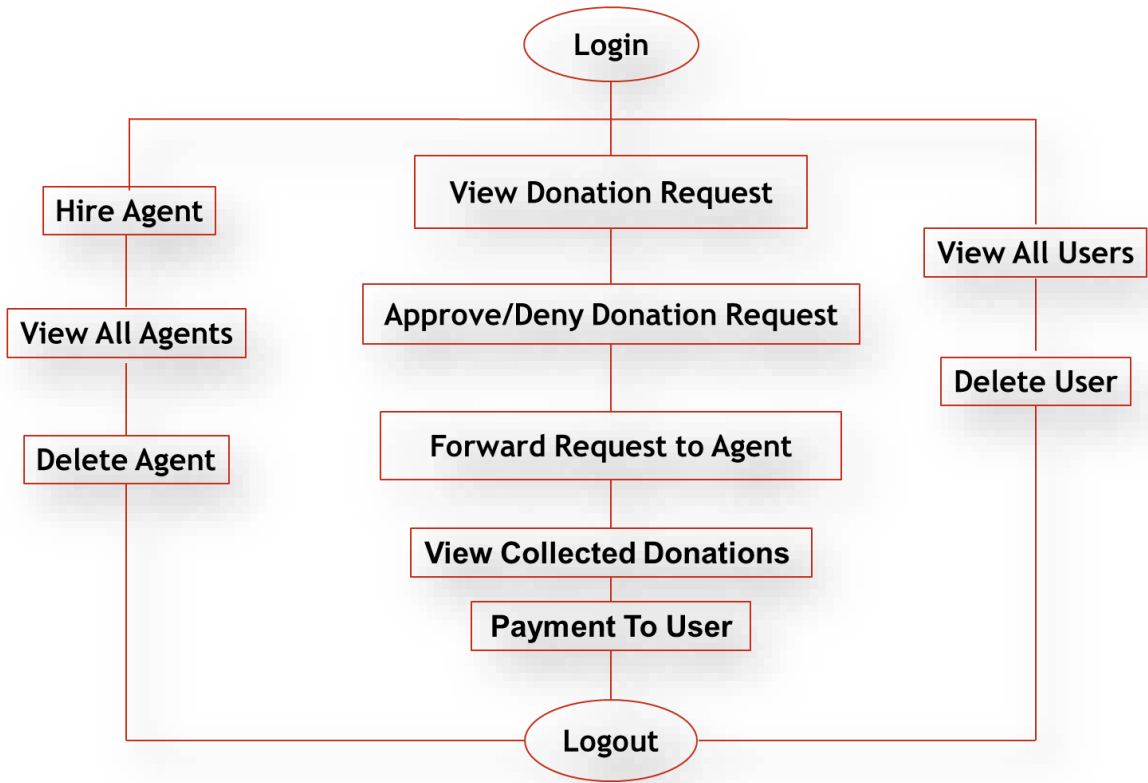
1. FUNCTIONAL REQUIREMENTS

- **Complete System:**

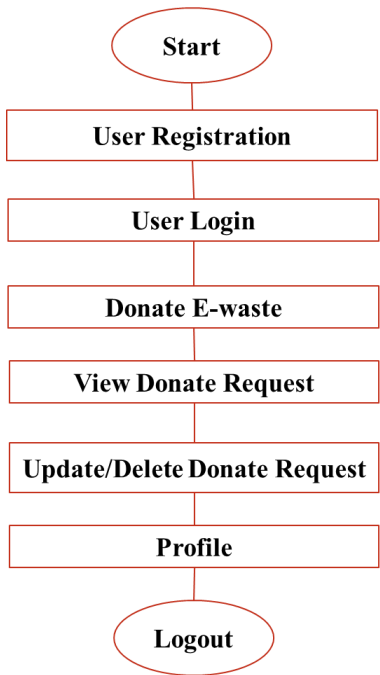
USE CASE DIAGRAM



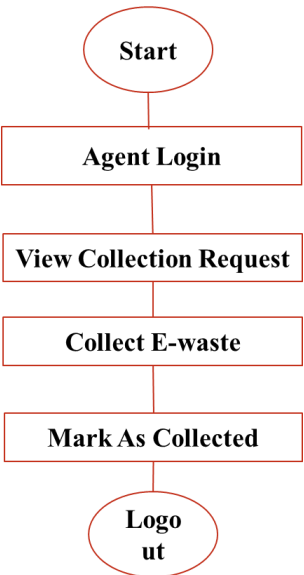
ADMIN MODULE



USER



AGENT



4.2 USER INTERFACE REQUIREMENTS

USER/ADMIN REGISTER PAGE

Evanescence E-Waste Register


Name	City
<input type="text" value="Full name"/>	<input type="text" value=""/>
Phone Number	Email-ID
<input type="text" value="Without +91"/>	<input type="text" value="Eg:-abc@gmail.com"/>
Password	Confirm Password
<input type="text" value="Enter a strong password"/>	<input type="text" value="Confirm entered password"/>
Security Question	Your answer
<input type="text" value=""/>	<input type="text" value="Remember this for forget passw"/>

☐ Accept terms and conditions [Terms and Conditions](#)

Already Registered ? [Login here](#)

[Register](#)

USER / ADMIN LOG-IN PAGE



Perfect Solution To Your E-Waste

Evanescence E-waste is an India's most loved and leading professional E-waste Management Company that has set industry benchmarks time and again with its innovative & environment friendly disposal practices.

E-Waste Management Login

Email-ID

Password

Not Registered Yet ?? [Register Here](#)

[Forgot Password ?](#)

[Login](#)

[Agent Login](#)

DONATE PAGE

[Home](#)[Donate](#)[Pending Donations](#)[View Donations](#)[Profile](#)[Logout](#)Welcome
UserName :- **User**Email :- **user@gmail.com**

Address

City

Quantity

Mention description of E-Waste

[Donate](#)

OUR MISSION

We collect E-waste from various societies and nearby localities. We are currently working only in four cities for now i.e. Mumbai, Hyderabad, Pune and Bangalore

PRODUCTS

E-Waste Management
E-Waste Recycling

USEFUL LINKS

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[DONATE](#)
[VIEW DONATION](#)
[PROFILE](#)

CONTACT

[Pune , Maharashtra](#)
[prashant@gmail.com](#)
[+91 7385641207](#)

PENDING DONATION PAGE

[Home](#)[Donate](#)[Pending Donations](#)[View Donations](#)[Profile](#)[Logout](#)Welcome
Alex

Request ID: 1

Name : AlexEmail : alex@gmail.comAddress: parthavi, emerald, narheQty. : 1Item : Mobile[Update](#)[Delete](#)

Image Already Uploaded

Request ID: 2

Name : AlexEmail : alex@gmail.comAddress: tanvi,narheQty. : 1Item : Television[Update](#)[Delete](#)

No file chosen

OUR MISSION

We collect E-waste from various societies and nearby localities. We are currently working only in four cities for now i.e

Mumbai, Hyderabad, Pune and Bangalore

PRODUCTS

E-Waste Management

E-Waste Recycling

USEFUL LINKS

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CONTACT

Pune , Maharashtra

prashant@gmail.com

+91 7385641207

PROFILE PAGE

[Home](#)[Donate](#)[Pending Donations](#)[View Donations](#)[Profile](#)[Logout](#)Welcome
Alex

PROFILE CARD

Full Name : Alex

Email ID : alex@gmail.com

City:Pune

Phone : 9876578945

OUR MISSION

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CONTACT

[Pune , Maharashtra](#)
[prashant@gmail.com](#)
[+91 7385641207](#)

Admin Module – Pending Requests

Admin Panel

Pending Requests

Collected Donations

View Users

Hire Agent


View Agents

LOGOUT

Sort City Wise

User
user@gmail.com
Request ID : 52
City : Mumbai
Symbi... read more
Delete Show Image Assign agent

User
user@gmail.com
Request ID : 53
City : Bangalore
Refri... read more
Delete Show Image Assign agent

Admin Panel

Pending Requests

Collected Donations

View Users

Hire Agent

View Agents

LOGOUT


Collections

Donation Id ↑↓ Enter Donati	Name ↑↓ Enter Name..	Email ID ↑↓ Enter Email ID	E-Waste Donated	Quantity	Agent-Id ↑↓ Enter Agent-	Payment
2	User	user@gmail.com	Samsung Mobile	2	1	Paid : Rs. 150

5 Showing rows 1 to 1 of 1

<< < 1 > >>

Admin Module - View All Users/admin

**Admin Panel**[Pending Requests](#)[Collected Donations](#)[View Users](#)[Hire Agent](#)[View Agents](#)[LOGOUT](#)


All Users

Name ↑↓ Enter Name...	City ↑↓ Enter City...	Phone ↑↓ Enter Phone...	E-mail Enter E-mail...	Admin	Action
Admin	Pune	9156075065	admin@gmail.com	true	Delete
User	Pune	9156075065	user@gmail.com	false	Delete

5 ▾ Showing rows 1 to 2 of 2

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Admin Module - View All Agents :

**Admin Panel**[Pending Requests](#)[Collected Donations](#)[View Users](#)[Hire Agent](#)[View Agents](#)[LOGOUT](#)


All Agents

ID ↑↓ Enter ID...	Name ↑↓ Enter Name...	E-mail ↑↓ Enter E-mail...	Phone no. ↑↓ Enter Phone no.	City Enter City...	Action
1	Agent	agent@gmail.com	9156075065	Pune	Delete

5 ▾ Showing rows 1 to 1 of 1

<< < 1 > >>

Admin Module - Hire Agent :

**Admin Panel**

[Pending Requests](#) [Collected Donations](#) [View Users](#) [Hire Agent](#) [View Agents](#) [LOGOUT](#)

Hire Agent

Full name

City


Phone Number

Email-ID

Password

Register

Agent Login Page




Agent Login

Email-ID

Password

Login

AGENT HOME PAGE :



Agent Dashboard

PROFILE

LOGOUT

Welcome Agent

All Requests

Request ID ↑↓	Name ↑↓	Address ↑↓	City ↑↓	E-waste ↑↓	Quantity	Action
<input type="text" value="Enter Request ID."/>	<input type="text" value="Enter Name..."/>	<input type="text" value="Enter Address..."/>	<input type="text" value="Enter City..."/>	<input type="text" value="Enter E-waste..."/>		
2	User	Pune, Maharashtra,	Pune	Samsung Mobile	2	Collected

5

Showing rows 1 to 1 of 1

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5. Database Design

The following table structures depict the database design.

ER Diagram



6. Testing:

The report of the testing is given here under.

Test Cases

Sr. No	Test Case Title	Description	Expected Outcome	Error Message	Result
1	Login Page	User should see login page when user will enter email and password.	After signing in user to be directed to home page	Invalid Login	Passed
2	Home page Displayed	Home page display for every successful log in.	Home Page Displayed	No Error	Passed
3	Donate Page	Users can add their request of e-waste by filling the details such as quantity, description, images.	Request must be display in pending donation.	Validation error	Passed
4	View Donation page	Here, user can see his all completed donations.	User can check all his donations approved by admin	No Error	Passed
5	Profile	User can see all his details submitted to the company.	User can confirm all his details in card format.	No Error	Passed
6	Register	Should not allow any control to be empty if not null	If validated Allow to go to login page	Validation Error	Passed
7	Forget Password	User allowed to reset password through verifying email, security question and security answer	If validated allow to reset password	No error	Passed
8	Log Out	User should be able to logout from the website	User will logout and will be redirected to the Log in In page.	No Error	Passed

7. Project Management Methodology:

Scrum Agile Methodology was used.

8. FUTURE SCOPE :

1. We will add buyers so that they can buy E-Waste and also provide payment gateway to the user so that he can also pay and accept through online mode.
2. We will be adding feature for recycling companies to the website so that it will give more options to manage the e-waste.
3. We will also give the order tracking functionality to the user.