GARBAGE MANAGEMENT SYSTEM

Project Report Submitted By

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DEPARTMENT OF COMPUTER APPLICATIONS AMAL JYOTHI COLLEGE OF ENGINEERING

KANJIRAPPALLY



CERTIFICATE

This is to certify that the Project report, "GARBAGE MANAGEMENT SYSTEM" is the bonafide work of LIYAN SUSAN KURIAN (Reg.No: AJC17MCA-I033) in partial fulfillment of the requirements for the award of the Degree of Integrated Master of Computer Applications under APJ Abdul Kalam Technological University during the year 2017-22.

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DECLARATION

I hereby declare that the project report "GARBAGE MANAGEMENT SYSTEM" is a

bonafide work done at Amal Jyothi College of Engineering, towards the partial fulfilment

of the requirements for the award of the Degree of Integrated Master of Computer

Applications (MCA) from APJ Abdul Kalam Technological University, during the

academic year 2017- 2022.

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LIYAN SUSAN KURIAN

ABSTRACT

Sustainability starts at home. With WM, you can be sure your materials are collected safely and ontime - and most importantly - handled the right way for the environment. Apartments like yours can depend on WM to provide reliable and environmentally friendly solutions.

The people living in the Apartments are finding it difficult to dump the waste, they don't have a proper place to dump the waste. In order to overcome this problem, I proposed a system of garbage management. In this System The Apartment(User) first register to the website and create profile which request for bin, then this request is approved by the staff. After the request is accepted, user must choose the date for pickup. After this staff will assign a driver to the corresponding user. From that pickup date on-wards the driver will start collecting waste daily. The user must pay a fixed advance amount for the service.

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List of Abbreviation

IDE - Integrated Development Environment.

HTML - Hyper Text Markup Language.

CSS - Cascading Style Sheet.

SQL - Structured Query Language.

UML - Unified Modeling Language.

CHAPTER 1

INTRODUCTION

1.1 PROJECT OVERVIEW

The people living in the Apartments are finding it difficult to dump the waste, they don't have a proper place to dump the waste. In order to overcome this problem I proposed a system of garbage management. In this System The Apartment(User) first register to the website and create profile which request for bin, then this request is approved by the staff. After the request is accepted, user must choose the date for pickup. After this staff will assign a driver to the corresponding user. From that pickup date on-wards the driver will start collecting waste daily. The user must pay a fixed advance amount for the service.

1.2 PROJECT SPECIFICATION

The proposed system is a website in which user can request to collect waste.

The system includes 4 Actors. They are:

1. Admin Module

Admin must have a login into this system. He has the overall control of the system. Admin can add or update service details, manage staff and driver, leave management. Admin can View all the registered users and also manage all his data. Admin have the power to add staff and driver by entering their details

2. Staff Module

Staff has the control of driver and user. Staff has the power to approve user and assign driver to that route. Responding to user demands, approving leave of driver, managing complaints etc. Staff have the power to reject and accept . Staff can apply leave and can see the leave status that is approved or rejected by admin and also cancel the leave at anytime.

3. User Module

User can register and they can request for waste collection ,send compliant, the project provides a secure payment method for the user. Razorpay method used here for payment. The Razorpay Checkout offers multiple payment methods, allowing your customer the flexibility to complete the payment using the payment method of their choice.

4. Driver Module

A driver will check the daily work updates and the driver relocate for the garbage collections. Driver can view all the collections details. Driver can apply leave and can see the leave status that is approved or rejected by staff and also cancel the leave at anytime.

CHAPTER 2

SYSTEM STUDY

2.1 INTRODUCTION

System analysis is a process of gathering and interpreting facts, diagnosing problems and the information to recommend improvements on the system. It is a problem-solving activity that requires intensive communication between the system users and system developers. System analysis or study is an important phase of any system development process. The Garbage management system is studied to the minute's detail and analyzed. The system analyst plays the role of the interrogatorand dwells deep into the working of the present system. The system is viewed as a whole and the input to the system are identified. The outputs from the organizations are traced to the various processes. System analysis is concerned with becoming aware of the problem, identifying the relevant and decisional variables, analyzing, and synthesizing the various factors and determining an optimal or at least a satisfactory solution or program of action.

A detailed study of the process must be made by various techniques like questionnaires etc. The data collected by these sources must be scrutinized to arrive to a conclusion. The conclusion is an understanding of how the system functions. This system is called the existing system. Now the existing system is subjected to close study and problem areas are identified. The designer now functions as a problem solver and tries to sort out the difficulties that the enterprise faces. The solutions are given as proposals. The proposal is then weighed with the existing system analytically and the best one is selected. The proposal is presented to the user for an endorsement by the user. The proposal is reviewed on user requestand suitable changes are made. This is loop that ends as soon as the user is satisfied with proposal.

Preliminary study is the process of gathering and interpreting facts, using the information for further studies on the system. Preliminary study is problem solving activity that requires intensive communication between the system users and system developers. It does various feasibility studies. In these studies, a rough figure of the system activities can be obtained, from which the decision about the strategies to be followed for effective system study and analysis can be taken.

2.2 EXISTING SYSTEM OF GARBAGE MANAGEMENT SYSTEM

Employees heading for their workstations every morning. Collecting waste from user and dumping to a place.

2.3 DRAWBACKS OF EXISTING SYSTEM

- High costs.
- Unhygienic Environment and look of the city.
- Bad smell spreads and may cause illness to human beings.

2.4 PROPOSED SYSTEM

The people living in the Apartments are finding it difficult to dump the waste, they don't have a proper place to dump the waste. In order to overcome this problem I proposed a system of garbage management. In this System The Apartment(User) first register to the website and create profile which request for bin, then this request is approved by the staff. After the request is accepted, user must choose the date for pickup. After this staff will assign a driver to the corresponding user. From that pickup date on-wards the driver will start collecting waste daily. The user must pay a fixed advance amount for the service.

2.5 ADVANTAGES OF PROPOSED SYSTEM

- User friendliness and interactive.
- Improves Environment quality
- Easy

CHAPTER 3 REQUIREMENT ANALYSIS

3.1 FEASIBILITY STUDY

Feasibility study is made to see if the Garbage management system on completion will serve the purpose of the organization for the amount of work, effort and the time that spend on it. Feasibility study lets me to foresee the future of the project and the usefulness. A feasibility study of a system proposal is according to its workability, which is the impact on the organization, ability to meet their user needs and effective use of resources. Thus, when a new application is proposed it normally goes through a feasibility study before it is approved for development

3.1.1 Technical Feasibility

Technical feasibility is concerned with the availability of hardware and software required for the development of the system, to see compatibility and maturity of the technology proposed to be used and to see the availability of the required technical manpower to develop the system.

After the study I came to conclusion that we proceed further with the tools and development environment chosen by us. This was important in our case as we were working on two various phases of the department that will need to be integrated in future to make an extended system. So, it's clear that the project GMS is Technically feasible.

3.1.2 Resource feasibility

This aspect looks at the resources that are required to complete the project and whether the amount of available resources is sufficient to complete the project effectively. Resources that are required for the GMS project includes: Programming device (Laptop), Hosting space (freely available), Programming tools (freely available), Programming individuals. So, it's clear that the project GMS has the required resource feasibility.

3.1.3 Economic Feasibility

The proposed system is developed as part of project work, there is no manual cost to spend for the proposed system. Also all the resources are already available, it give an indication of the system is economically possible for development.

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The cost of project, GARBAGE MANAGEMENT SYSTEM was divided according to the system used, its development cost and cost for hosting the project. According to all the calculations the project was developed in a low cost. As it is completely developed using open source software.

3.2 SYSTEM SPECIFICATION

3.2.1 Hardware Specification

Processor : Intel core i4 and above.

RAM : 512MB and above.

Hard Disk : 40 GB and above.

3.2.2 Software Specification

Front End : HTML, CSS, Bootstrap.

Backend : MySQL, PHP.
Client on PC : Windows, Linux.

Browser : Google Chrome, Microsoft Edge.

Technologies used : JS, HTML5, AJAX, ¡Query, PHP, CSS.

3.3 SOFTWARE DESCRIPTION

3.3.1 HTML

HTML (Hypertext Markup Language) is the most basic building block of the Web. HTML is a fairly simple language made up of elements, which can be applied to pieces of text to give them different meaning in a document, structure a document into logical sections, and embed content such as images and videos into a page. In the proposed system, HTML 5 is used to carry out the design part of the webpage.HTML validations are also used.

3.3.2 CSS

While HTML is used to define the structure and semantics of your content, CSS is used to style it and lay it out. For example, you can use CSS to alter the font, color, size, and spacing of your content, split it into multiple columns, or add animations and other decorative features. In the proposed system CSS 3 is used. Animation using CSS is also used to give the website a unique look & feel

3.3.3 Bootstrap

Bootstrapping describes a situation in which an entrepreneur starts a company with little capital, relying on money other than outside investments. An individual is said to be bootstrapping when they attempt to found and build a company from personal finances or the operating revenues of the new company.

Bootstrap is an HTML, CSS & JS Library that focuses on simplifying the development of informative web pages (as opposed to web apps). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project.

3.3.4 Java Script

JavaScript was initially created to "make web pages alive". The programs in this language are called scripts. They can be written right in a web page's HTML and run automatically as the page loads. In the proposed system loading screen, different popup animations are implemented using Java Script.

3.3.5 jQuery

jQuery is a lightweight, "write less, do more", JavaScript library. The purpose of jQuery is to make it much easier to use JavaScript on your website. jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish and wraps them into methods that you can call with a single line of code. jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation. The jQuery library contains the following features: HTML/DOM manipulation, CSS manipulation, HTML event methods, Effects and animations, AJAX.

3.3.6 PHP

PHP is a server scripting language used for making dynamic web pages. That means PHP allows you to use scripts on a web server to produce a response customized for each client's (user's) request. The proposed system developed in PHP 7 and is hosted in a local server (Local Host). All database interactions are carried out using PHP.

3.3.7 MySQL

MySQL is a database management system that allows you to manage relational databases. It is open-source software backed by Oracle. All data related with the system is stored and manages using MySQL database. MySQL, the most popular Open-Source SQL database management system, is developed, distributed, and supported by Oracle Corporation. The MySQL Web site provides the latest information about MySQL software.

CHAPTER 4

SYSTEM DESIGN

4.1 INTRODUCTION

Design is the first step into the development phase for any engineered product or system. Design is a creative process. A good design is the key to effective system. The term "design" is defined as "the process of applying various techniques and principles for the purpose of defining a process or a system in sufficient detail to permit its physical realization". It may be defined as a process of applying various techniques and principles for the purpose of defining a device, a process or a system in sufficient detail to permit its physical realization. Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm that is used. The system design develops the architectural detail required to build a system or product. As in the case of any systematic approach, this software too has undergone the best possible design phase fine tuning all efficiency, performance and accuracy levels. The design phase is a transition from a user-oriented document to a document to the programmers or database personnel. System design goes through two phases of development: Logical and Physical Design

4.2 UML DIAGRAM

UML is a standard language for specifying, visualizing, constructing, and documenting the artifacts of software systems. UML stands for Unified Modelling Language. UML is a pictorial language used to make software blueprints. UML can be described as a general-purpose visual modelling language to visualize, specify, construct, and document software system. Although UML is generally used to model software systems, it is not limited within this boundary. It is also used to model non-software systems as well. For example, the process flow in a manufacturing unit, etc. UML is not a programming language, but tools can be used to generate code in various languages using UML diagrams. UML has a direct relation with object-orientedanalysis and design.

4.2.1 USE CASE DIAGRAM

A use case diagram is a graphic depiction of the interactions among the elements of a system. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. In this context, the term "system" refers to something being developed or operated, such as a mail-order product sales and service Web site. Use case diagrams are

employed in UML (Unified Modelling Language), a standard notation forth modelling of realworld objects and systems

A use case diagram contains four components.

- The boundary, which defines the system of interest in relation to the world around it.
- The actors, usually individuals involved with the system defined according to their roles.
- The use cases, which are the specific roles are played by the actors within and around the system.
- The relationships between and among the actors and the use cases.

Use case diagrams are drawn to capture the functional requirements of a system. After identifying the above items, we have to use the following guidelines to draw an efficient use case diagram

- The name of a use case is very important. The name should be chosen in such a way so that it can identify the functionalities performed.
- Give a suitable name for actors.
- Show relationships and dependencies clearly in the diagram.
- Do not try to include all types of relationships, as the main purpose of the diagram is to identify the requirements.
- Use notes whenever required to clarify some important points.



Fig 1: Use case diagram for Garbage Management System

4.2.2 ACTIVITY DIAGRAM

Activity Diagrams are used to illustrate the flow of control in a system and refer to the steps involved in the execution of a use case. We model sequential and concurrent activities using activity diagrams. So, we basically depict workflows visually using an activity diagram. An activity diagram focuses on condition of flow and the sequence in which it happens. We describe or depict what causes a particular event using an activity diagram.

An activity diagram portrays the control flow from a start point to a finish point showing the various decision paths that exist while the activity is being executed. We can depict both sequential processing and concurrent processing of activities using an activity diagram. They are used in business and process modelling where their primary use is to depict the dynamic aspects of a system.

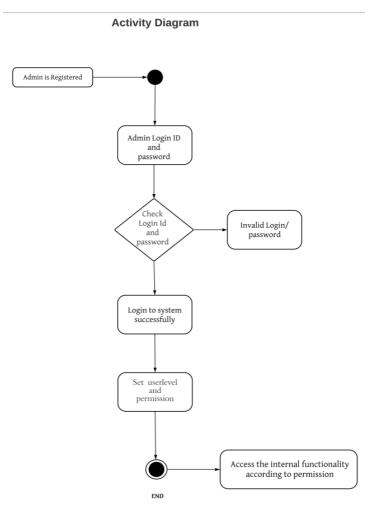


Fig 2: Activity diagram for Garbage Management System

4.2.3 DEPLOYMENT DIAGRAM

Deployment diagrams are used to visualize the topology of the physical components of a system, where the software components are deployed. Deployment diagrams are used to describe the static deployment view of a system. Deployment diagrams consist of nodes and their relationships.

The purpose of deployment diagrams can be described as –

- Visualize the hardware topology of a system.
- Describe the hardware components used to deploy software components.
- Describe the runtime processing nodes.

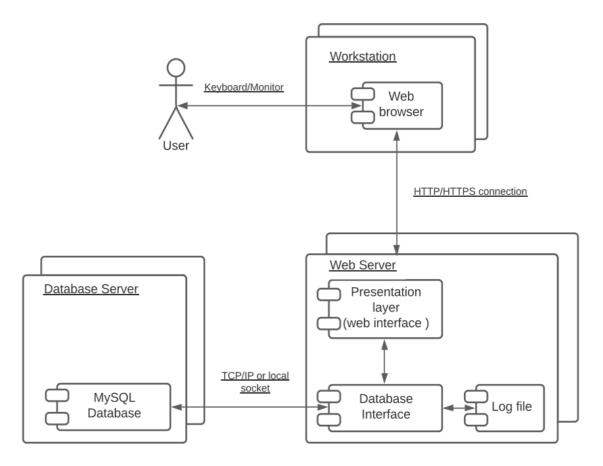


Fig 3: Deployment diagram for Garbage Management System

4.2.4 STATE CHART DIAGRAM

A state diagram is used to represent the condition of the system or part of the system at finite instances of time. It's a behavioral diagram and it represents the behavior using finite state transitions. State diagrams are also referred to as **State machines** and **State-chart Diagrams**. These terms are often used interchangeably. So simply, a state diagram is used to model the dynamic behavior of a class in response to time and changing external stimuli. We can say that each and every class has a state but we don't model every class using State diagrams. We prefer to model the states with three or more states.

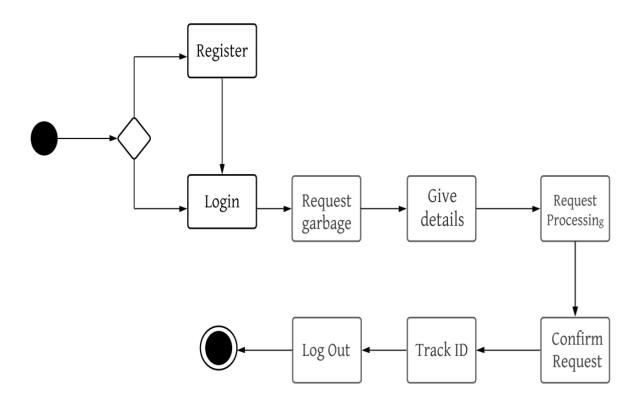


Fig 4: State Chart diagram for Garbage Management System

4.2.5 COLLABORATION DIAGRAM

A collaboration diagram, also known as a communication diagram, is an illustration of the relationships and interactions among software objects in the Unified Modeling Language (UML). These diagrams can be used to portray the dynamic behavior of a particular use case and define the role of each object.

Collaboration diagrams are created by first identifying the structural elements required to carry out the functionality of an interaction. A model is then built using the relationships between those elements. Several vendors offer software for creating and editing collaboration diagrams.

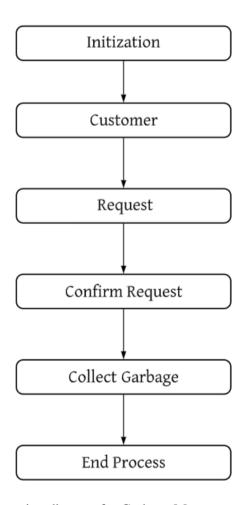
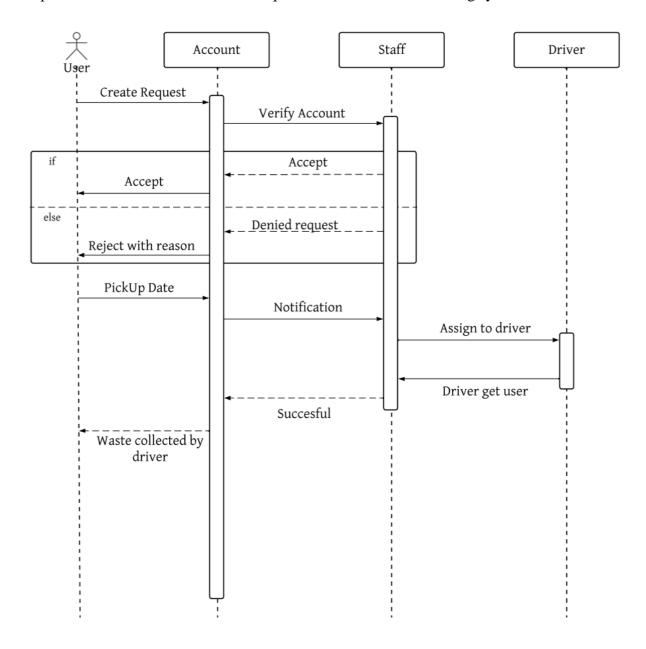


Fig 5: Collaboration diagram for Garbage Management System

4.2.6 Sequence Diagram

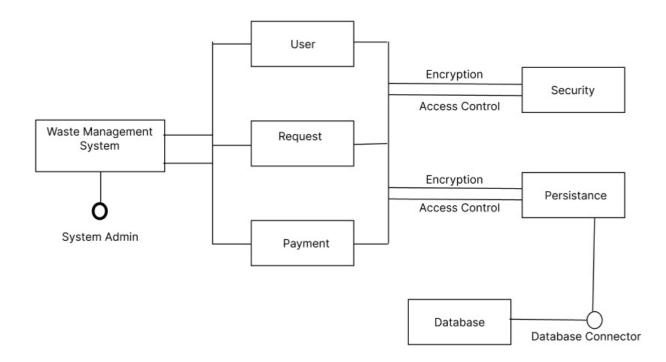
A sequence diagram simply depicts interaction between objects in a sequential order i.e, the order in which these interactions take place. We can also use the terms event diagrams or event scenarios to refer to a sequence diagram. Sequence diagrams describe how and in what order the objects in a system function. These diagrams are widely used by businessmen and software developers to document and understand requirements for new and existing systems.



4.2.7 Component diagram

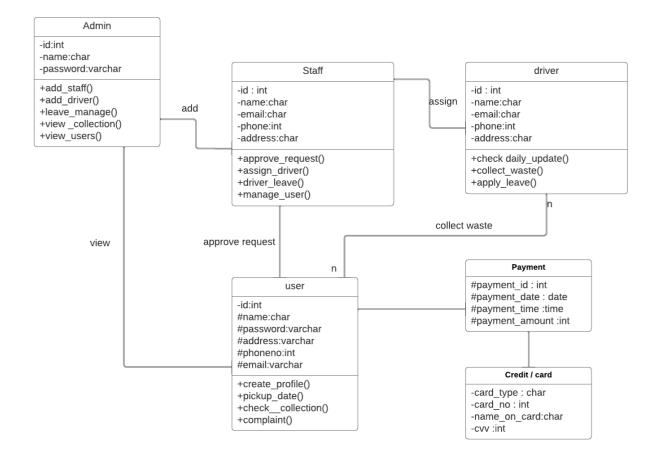
A component diagram breaks down the actual system under development into various high levels of functionality. Each component is responsible for one clear aim within the entire system and only interacts with other essential elements on a need-to-know basis.

It visualizes the relationships as well as the organization between the components present in the system. It helps in forming an executable system. A component is a single unit of the system, which is replaceable and executable. The implementation details of a component are hidden, and it necessitates an interface to execute a function. It is like a black box whose behavior is explained by the provided and required interfaces.



4.2.8 Class diagram

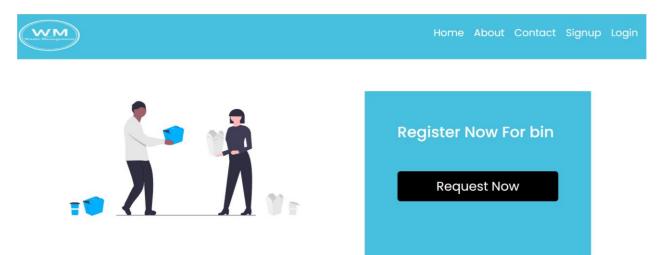
Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application. Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object-oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages. Class diagram shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram.



4.3 USER INTERFACE DESIGN

4.3.1 DESIGN PROTOTYPE

Home Page



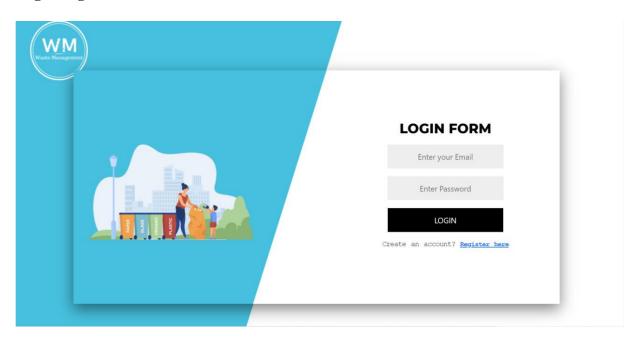
About

WM is a market platform where waste collected from all Apartments. We are really concerned with the environmental and social aspects. Our platform features a comprehensive recycling database that gives the user the ability to easily assemble a recycling to-do list; and it's all just one button click away.

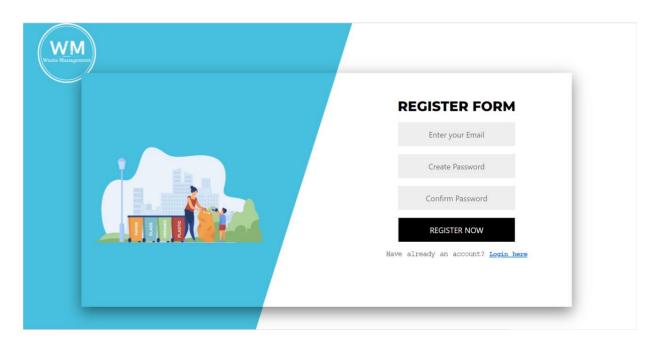


Contact Us	
Email address	
Enter email	
We'll never share your email with anyone else.	
Mobile Number	
Password	
Your Message	
Submit	
Submit	

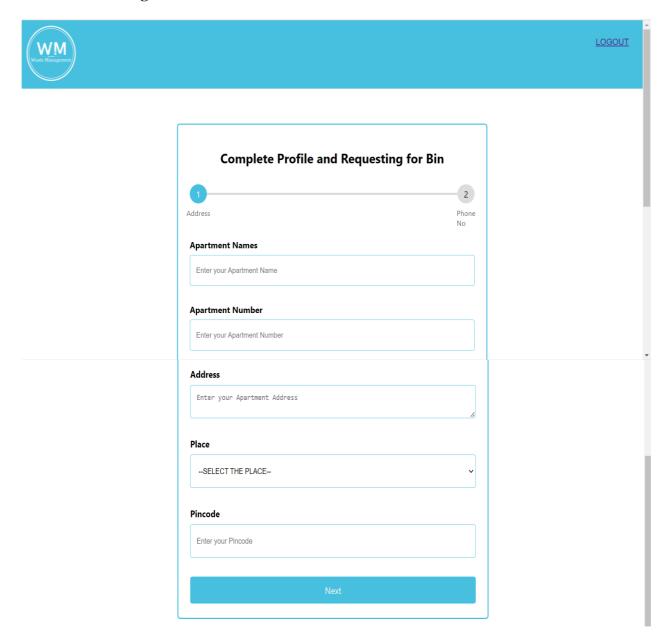
Login Page



Registration Page



Create Profile Page



4.4 DATABASE DESIGN

A database is an organized mechanism that has the capability of storing information through which a user can retrieve stored information in an effective and efficient manner. The data is the purpose of any database and must be protected. The database design is a two-level process. In the first step, user requirements are gathered together and a database is designed which will meet these requirements as clearly as possible. This step is called Information Level Design and it is taken independent of any individual DBMS.

In the second step, this Information level design is transferred into a design for the specific DBMS that will be used to implement the system in question. This step is called Physical Level Design, concerned with the characteristics of the specific DBMS that will be used. A database design runs parallel with the system design. The organization of the data in the database is aimed to achieve the following two major objectives.

- Data Integrity
- Data independence

Relational Database Management System (RDBMS)

A relational model represents the database as a collection of relations. Each relation resembles a table of values or file of records. In formal relational model terminology, a row is called a tuple, a column header is called an attribute and the table is called a relation. A relational database consists of a collection of tables, each of which is assigned a unique name. A row in a tale represents a set of related values.

Relations, Domains & Attributes

A table is a relation. The rows in a table are called tuples. A tuple is an ordered set of n elements. Columns are referred to as attributes. Relationships have been set between every table in the database. This ensures both Referential and Entity Relationship Integrity. A domain D is a set of atomic values. A common method of specifying a domain is to specify a data type from which the data values forming the domain are drawn. It is also useful to specify a name for the domain to help in interpreting its values.

Relationships

- Table relationships are established using Key. The two main keys of prime importance are Primary Key & Foreign Key. Entity Integrity and Referential Integrity Relationships can be established with these keys.
- Entity Integrity enforces that no Primary Key can have null values.
- Referential Integrity enforces that no Primary Key can have null values.
- Referential Integrity for each distinct Foreign Key value, there must exist a matching Primary Key value in the same domain. Other key is Super Key and Candidate Keys.

Normalization

Data are grouped together in the simplest way so that later changes can be made with minimum impact on data structures. Normalization is formal process of data structures in manners that eliminates redundancy and promotes integrity. Normalization is a technique of separating redundant fields and breaking up a large table into a smaller one. It is also used to avoid insertion, deletion, and updating anomalies. Normal form in data modelling use two concepts, keys and relationships. A key uniquely identifies a row in a table. There are two types of keys, primary key and foreign key. A primary key is an element or a combination of elements in a table whose purpose is to identify records from the same table. A foreign key is a column in a table that uniquely identifies record from a different table. All the tables have been normalized up to the third normal form. As the name implies, it denotes putting things in the normal form. The application developer via normalization tries to achieve a sensible organization of data into proper tables and columns and where names can be easily correlated to the data by the user. Normalization eliminates repeating groups at data and thereby avoids data redundancy which proves to be a great burden on the computer resources. These include:

- Normalize the data.
- Choose proper names for the tables and columns.
- Choose the proper name for the data.

First Normal Form

The First Normal Form states that the domain of an attribute must include only atomic values and that the value of any attribute in a tuple must be a single value from the domain of that attribute. In other words, 1NF disallows "relations within relations" or "relations as attribute values within tuples". The only attribute values permitted by 1NF are single atomic or indivisible values. The first step is to put the data into First Normal Form. This can be donor by moving data into separate tables where the data is of similar type in each table. Each table is given a Primary Key or Foreign Key as per requirement of the project. In this we form new relations for each non-atomic attribute or nested relation. This eliminated repeating groups of data. A relation is said to be in first normal form if only if it satisfies the constraints that contain the primary key only.

Second Normal Form

According to Second Normal Form, for relations where primary key contains multiple attributes, no non-key attribute should be functionally dependent on a part of the primary key. In this we decompose and setup a new relation for each partial key with its dependent attributes. Make sure to keep a relation with the original primary key and any attributes that are fully functionally dependent on it. This step helps in taking out data that is only dependent on a part of the key. A relation is said to be in second normal form if and only if it satisfies all the first normal form conditions for the primary key and every non-primary key attribute of the relation is fully dependent on its primary key alone.

Third Normal Form

According to Third Normal Form, Relation should not have a non-key attribute functionally determined by another non-key attribute or by a set of non-key attributes. That is, there should be no transitive dependency on the primary key. In this we decompose and set up relation that includes the non-key attributes that functionally determines other non-key attributes. This step is taken to get rid of anything that does not depend entirely on the Primary Key. A relation is said to be in third normal form if only if it is in second normal form and more over the non key attributes of the relation should not be depend on another non-key attribute.

TABLE DESIGN

Table No: 01

Table Name: tbl_register

Primary Key: Id

Table Description: To store user Login information

Field Name	Туре	Size	Description
Id	int	10	Primary Key
Email_Id	varchar	10	Email id of user
Password	varchar	10	Create a password
Type	varchar	10	Role of user
status	int	10	Status of the user

Table No: 02

Table Name: tbl_staff

Primary Key: id

Foreign Key: staff_id references tbl_register
Table Description: To store staff information

Field Name Size **Description Type** id 10 Primary Key int staff Id 10 Foreign Key int Full name of staff Fullname 30 varchar DOB 10 Date of birth of staff date Address 50 Address of staff varchar 10 Phone number of staff Phone int 10 Alternate number of staff Alternate_phone int Join_date 10 Join date of staff date 50 Image of staff Image varchar 10 Status of staff Status int

Table No: 03

Table Name: tbl_driver

Primary Key: id

Foreign Key: driver_id references tbl_register

Table Description: To store driver information

Field Name	Type	Size	Description
id	int	10	Primary Key
driver_Id	int	10	Foreign Key
Fullname	varchar	30	Full name of driver
DOB	date	10	Date of birth of driver
Address	varchar	50	Address of driver
Phone	int	10	Phone number of driver
Alternate_phone	int	10	Alternate number of driver
Join_date	date	10	Join date of staff
License_Image	varchar	50	License image of staff
Status	int	10	Status of driver

Table No: 04

Table Name: tbl_leave

Primary Key: id

Foreign Key: uid references user_profile

Table Description : To store leave information

Field Name	Type	Size	Description
id	int	10	Primary Key
uid	int	10	Foreign Key
startdate	int	10	Leave Start Date
enddate	date	10	Leave End Date
Reason	varchar	10	Reason of leave

Table No: 05

Table Name: tbl_user_profile

Primary Key: id

Foreign Key: uid references user_profile

Table Description : To store user information

Field Name	Type	Size	Description
Id	int	10	Primary key
uid	int	10	Foreign key
Apartment_no	int	10	No: of Apartment
Apartment_name	varchar	15	Name of Apartment
Phone no:	int	10	Phone of Apartment
Alternative no:	int	10	Alternative phone
Address	varchar	50	Address of user
Pincode	int	10	Pincode of place
Waste collect time	varchar	10	Time of collection

Table No: 06

Table Name: tbl_payment

Primary Key: P_id

Table Description : To store card information

Field Name	Type	Size	Description
Id	int	10	Primary key
email	varchar	10	Email of user
amount	int	30	Amount to pay
payment_status	varchar	15	Completed/Pending
payment_id	varchar	10	Payment id
added_on	timestamp	20	Payment time and date

Table No: 07

Table Name: tbl_pickupdetails

Primary Key: id

Foreign Key: uid references user_profile

Table Description : To store pickup information

Field Name	Type	Size	Description
Id	int	10	Primary key
uid	int	10	Foreign Key
pickupdate	date	30	When to collect the waste
pickupday	varchar	15	daily
status	int	10	status
assign	varchar	20	Assigned driver
updated_date	timestamp	30	Pickup updated date

Table No: 08

Table Name: tbl_collection

Primary Key: id

Foreign Key: uid references user_profile

Table Description : To store collection information

Field Name	Type	Size	Description
Id	int	10	Primary key
uid	int	10	Foreign Key
status	varchar	30	Collected or no
date	timestamp	15	Date and time
dassign	varchar	200	Driver assigned to the user

CHAPTER 5 SYSTEM TESTING

5.1 INTRODUCTION

Software Testing is the process of executing software in a controlled manner, in order to answer the question - Does the software behave as specified? Software testing is often used in association with the term's verification and validation. Validation is the checking or testing of items, includes software, for conformance and consistency with an associated specification. Software testing is just one kind of verification, which also uses techniques such as reviews, analysis, inspections, and walkthroughs. Validation is the process of checking that what has been specified is what the user actually wanted.

Other activities which are often associated with software testing are static analysis and dynamic analysis. Static analysis investigates the source code of software, looking for problems and gathering metrics without actually executing the code. Dynamic analysis looks at the behaviour of software while it is executing, to provide information such as execution traces, timing profiles, and test coverage information.

Testing is a set of activity that can be planned in advanced and conducted systematically. Testing begins at the module level and work towards the integration of entire computers-based system. Nothing is complete without testing, as its vital success of the system testing objectives, there are several rules that can serve as testing objectives. They are:

Testing is a process of executing a program with the intent of finding an error.

- A good test case is one that has high possibility of finding an undiscovered error.
- A successful test is one that uncovers an undiscovered error.

If a testing is conducted successfully according to the objectives as stated above, it would uncover errors in the software. Also testing demonstrate that the software function appears to be working according to the specification, that performance requirement appears to have been met.

5.2 TEST PLAN

A test plan implies a series of desired course of action to be followed in accomplishing various testing methods. The Test Plan acts as a blue print for the action that is to be followed. The software engineers create a computer program, its documentation, and related data structures. The software developers are always responsible for testing the individual units of the programs,

ensuring that each performs the function for which it was designed. There is an independent test group (ITG) which is to remove the inherent problems associated with letting the builder to test the thing that has been built. The specific objectives of testing should be stated in measurable terms. So that the mean time to failure, the cost to find and fix the defects, remaining defect density or frequency of occurrence and test work-hours per regression test all should be stated within the test plan.

The levels of testing include:

- Unit testing
- Integration Testing
- Data validation Testing
- Output Testing

5.2.1 Unit Testing

Unit testing focuses verification effort on the smallest unit of software design — the software component or module. Using the component level design description as a guide, important control paths are tested to uncover errors within the boundary of the module. The relative complexity of tests and uncovered scope established for unit testing. The modular interface is tested to ensure that information properly flows into and out of the program unit under test. The local data structure is examined to ensure that data stored temporarily maintains its integrity during all steps in an algorithm's execution. Boundary conditions are tested to ensure that all statements in a module have been executed at least once. Finally, all error handling paths are tested.

Tests of data flow across a module interface are required before any other test is initiated. If data do not enter and exit properly, all other tests are moot. Selective testing of execution paths is an essential task during the unit test. Good design dictates that error conditions be anticipated and error handling paths set up to reroute or cleanly terminate processing when an error does occur. Boundary testing is the last task of unit testing step. Software often fails at its boundaries.

Unit testing was done in Sell-Soft System by treating each module as separate entity and testing each one of them with a wide spectrum of test inputs. Some flaws in the internal logic of the modules were found and were rectified. After coding each module is tested and run individually. All unnecessary code were removed and ensured that all modules are working and gives the expected result.

5.2.2 Integration Testing

Integration testing is systematic technique for constructing the program structure while at the same time conducting tests to uncover errors associated with interfacing. The objective is to take unit tested components and build a program structure that has been dictated by design. The entire program is tested as whole. Correction is difficult because isolation of causes is complicated by vast expanse of entire program. Once these errors are corrected, new ones appear and the process continues in a seemingly endless loop. After performing unit testing in the System all the modules were integrated to test for any inconsistencies in the interfaces.

5.2.3 Validation Testing or System Testing

This is the final step in testing. In this the entire system was tested as a whole with all forms, code, modules and class modules. This form of testing is popularly known as Black Box testing or System tests.

Black Box testing method focuses on the functional requirements of the software. That is, Black Box testing enables the software engineer to derive sets of input conditions that will fully exercise all functional requirements for a program.

Black Box testing attempts to find errors in the following categories; incorrect or missing functions, interface errors, errors in data structures or external data access, performance errors and initialization errors and termination errors.

5.2.4 Output Testing or User Acceptance Testing

The system considered is tested for user acceptance; here it should satisfy the firm's need. The software should keep in touch with perspective system; user at the time of developing and making changes whenever required. This done with respect to the following points:

- Input Screen Designs
- Output Screen Designs

The above testing is done taking various kinds of test data. Preparation of test data plays a vital role in the system testing. After preparing the test data, the system under study is tested using that test data. While testing the system by which test data errors are again uncovered and corrected by using above testing steps and corrections are also noted for future use.

5.2.5 Selenium testing

Selenium is one of the most widely used open-source Web UI (User Interface) automation testing suite. It was originally developed by Jason Huggins in 2004 as an internal tool at Thought Works. Selenium supports automation across different browsers, platforms and programming languages.

Selenium can be easily deployed on platforms such as Windows, Linux, Solaris and Macintosh. Moreover, it supports OS (Operating System) for mobile applications like iOS, windows mobile and android.

Selenium supports a variety of programming languages through the use of drivers specific to each language. Languages supported by Selenium include C#, Java, Perl, PHP, Python and Ruby. Currently, Selenium Web driver is most popular with Java and C#. Selenium test scripts can be coded in any of the supported programming languages and can be run directly in most modern web browsers. Browsers supported by Selenium include Internet Explorer, Mozilla Firefox, Google Chrome and Safari.

Selenium can be used to automate functional tests and can be integrated with automation test tools such as Maven, Jenkins, & Docker to achieve continuous testing. It can also be integrated with tools such as TestNG, & JUnit for managing test cases and generating reports.

5.2.6 Test cases for a Login Page

		Login Tost (Togo.		
<u> </u>		Login Test C	T		
Test Case	ID: Fun1			d By: Liyan Susar	
Test Priori	ity: High		Test Designe	d Date:20-05-202	2
Module Na	ame: Login		Test Execute	d By: Ms. Merin O	Chacko
Test Title: email and p	Verify login w password	ith valid	Test Execution	on Date:23-05-20	22
	n: Test the Logi	n Page	Doggword		
					G
Test Case No.	Test Step	Test Data	Expected	Actual Result	Status
1	Navigation Login Page		Page should be displayed	Page Displayed	Pass
	Provide valid email	roy@gmail.com	staff should be able to	staff Logged in and navigated to Dashboard	Pass
2	Provide valid password	roy	Login		
	Click on button		-		
3	Provide Invalid Email or password Provide Null credentials	Email: ro@gm.c Password: 1235 Email: Null or Password: null	staff should not be able to Login	Message for enter valid emailID or password displayed	Pass
	Click on button				

5.2.7 Test case for navigation page

		Navigation Test	Case		
Test Case I	D: Fun2		Test Designed	By: Liyan Susan l	Kurian
Test Priority: High			Test Designed	Date:20-05-2022	
Module Na	me: collection		Test Executed	By : Ms. Merin C	Chacko
Test Title: Verify login with valid email and password and navigate to other page			Test Execution Date:23-05-2022		
navigate to	collection page	ogin Page and	ssword		
Test Case No.	Test Step	Test Data	Expected	Actual Result	Status
1	Navigation Login Page		Page should be display	Page Displayed	Pass
	Provide gmail	roy@gmail.com	staff should be able to Login	staff Logged in and navigated to Dashboard and navigate to collect	Pass
2	Provide valid password	roy			
	Click on button			details page	
3	Provide Invalid Email or password Provide Null	Email: jo@gm.c Password: 1235 Email: Null or	staff should not be login	Message for enter valid emailID or password displayed	Pass
	Click on button	Password: null			

Testcase.java

```
package testcases;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import browserimplementation. DriverSetup;
public class Testcase {
 static WebDriver driver;
 static String URL = "http://localhost/WM/userlogin.php";//Add url of login page
 // login
 public static void login() {
    driver = DriverSetup.getWebDriver(URL);
    //name attribute of input box and btn in login page is given in By.name() and
 value to be passed is written in sendKeys()
    driver.findElement(By.name("mail")).sendKeys("roy@gmail.com");
    driver.findElement(By.name("pass")).sendKeys("roy");
    driver.findElement(By.name("reg")).click();
    String currentUrl = driver.getCurrentUrl();
    String expectedUrl = "http://localhost/WM/driverpanel.php"; //URL of the page
 which come after successful login
    if (currentUrl.equals(expectedUrl)) {
            System.out.println("login Successfull");
    } else {System.out.println("login Failed");
    }}
 // search
 public static void pageNavigation() throws InterruptedException {
    driver.get("http://localhost/WM/dcollection.php");//
    String currentUrl = driver.getCurrentUrl();
    String expectedUrl = "http://localhost/WM/dcollection.php";
    if (currentUrl.equals(expectedUrl)) {
            System.out.println("Page navigation successfull");
    } else {
            System.out.println("Page navigation is failed");}
  }}
```

Runner.java

```
package testcases;
public class Runner {
    public static void main(String[] args) throws InterruptedException {
         //test login
         Testcase.login();
         Testcase.pageNavigation();}
}
```

Fig:5.2.6.2:login test case

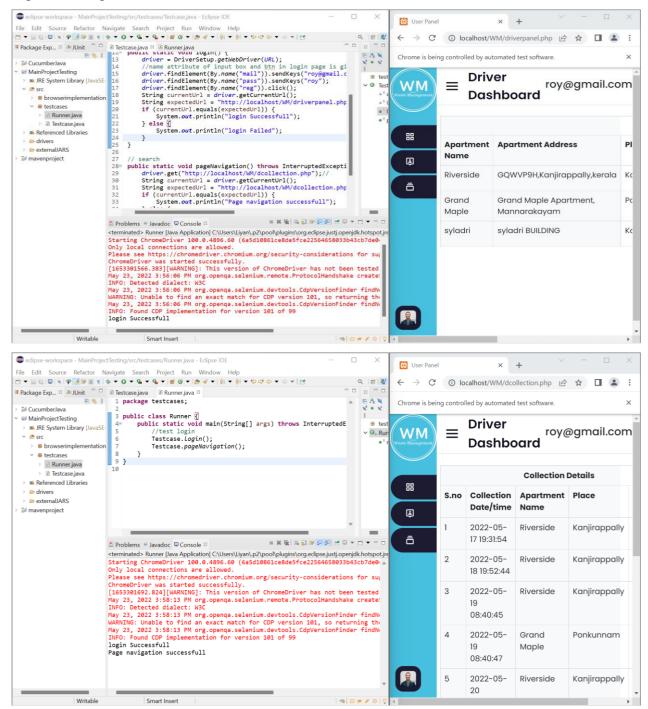


Fig:5.2.7.1: Page navigation test case

CHAPTER 6

IMPLEMENTATION

6.1 INTRODUCTION

Implementation is the stage of the project where the theoretical design is turned into a working system. It can be considered to be the most crucial stage in achieving a successful new system gaining the users confidence that the new system will work and will be effective and accurate. It is primarily concerned with user training and documentation. Conversion usually takes place about the same time the user is being trained or later. Implementation simply means convening a new system design into operation, which is the process of converting a new revised system design into an operational one.

At this stage the main workload, the greatest upheaval and the major impact on the existing system shifts to the user department. If the implementation is not carefully planned or controlled, it can create chaos and confusion.

Implementation includes all those activities that take place to convert from the existing system to the new system. The new system may be a totally new, replacing an existing manual or automated system or it may be a modification to an existing system. Proper implementation is essential to provide a reliable system to meet organization requirements. The process of putting the developed system in actual use is called system implementation. This includes all those activities that take place to convert from the old system to the new system. The system can be implemented only after through testing is done and if it is found to be working according to the specifications. The system personnel check the feasibility of the system. The more complex the system being implemented, the more involved will be the system analysis and design effort required to implement the three main aspects: education and training, system testing and changeover.

6.2 IMPLEMENTATION PROCEDURES

Implementation of software refers to the final installation of the package in its real environment, to the satisfaction of the intended uses and the operation of the system. In many organizations someone who will not be operating it, will commission the software development project. In the initial stage people doubt about the software but we have to ensure that the resistance does not build up, as one has to make sure that:

- The active user must be aware of the benefits of using the new system.
- Their confidence in the software is built up.
- Proper guidance is imparted to the user so that he is comfortable in using the application

Before going ahead and viewing the system, the user must know that for viewing the result, the server program should be running in the server. If the server object is not up running on the server, the actual process won't take place.

6.2.1 User Training

User training is designed to prepare the user for testing and converting the system. To achieve the objective and benefits expected from computer-based system, it is essential for the people who will be involved to be confident of their role in the new system. As system becomes more complex, the need for training is more important. By user training the user comes to know how to enter data, respond to error messages, interrogate the database and call up routine that will produce reports and perform other necessary functions.

6.2.2 Training on the Application Software

After providing the necessary basic training on computer awareness the user will have to be trained on the new application software. This will give the underlying philosophy of the use of the new system such as the screen flow, screen design type of help on the screen, type of errors while entering the data, the corresponding validation check at each entry and the ways to correct the date entered. It should then cover information needed by the specific user/ group to use the system or part of the system while imparting the training of the program on the application. This training may be different across different user groups and across different levels of hierarchy.

6.2.3 System Maintenance

Maintenance is the enigma of system development. The maintenance phase of the software cycle is the time in which a software product performs useful work. After a system is successfully implemented, it should be maintained in a proper manner. System maintenance is an important aspect in the software development life cycle. The need for system maintenance is for it to make adaptable to the changes in the system environment. Software maintenance is of course, far more than "Finding Mistakes".

CHAPTER 7 CONCLUSION AND FUTURE SCOPE

7.1 CONCLUSION

The aim of the project was to make a complete, fully working web-based garbage management system for the company. Requirements from the company has been gathered and taken into account. In web-based garbage management system there has been used an already implemented system to improve company's everyday use and to increase performance, productivity and efficiency. As a good project management system, it has a possibility to upload, download and delete files and uniformly gives change for developers to be in constant contact with the customer requirements and expectations for the project. User management tool in web-based project management system is a good appliance for keeping eye on the project and for giving rights to different users by system administrator in company. Finally, the whole system has been tested to ensure that everything functions correctly before the system processes actual data and produces information that people will rely on.

7.2 FUTURE SCOPE

- IOT based smart trash bin.
- Recycling.
- Collecting waste from all organisation.

CHAPTER 8 BIBLIOGRAPHY

REFERENCES

- United Nations Environmental Program(2013). "Guidelines for National Waste Management Strategies Moving from Challenges to Opportunities.".
- Marian Look, "Trash Plant: India", earth911B.
- Basic Feature, "Solid waste Management Project by MCGM".
- Hindustan Embedded System, "City Garbage collection indicator using RF (ZigBee) and GSM technology".

WEBSITES

• https://www.wm.com/

CHAPTER 9

APPENDIX

9.1 SAMPLE CODE

userpanel.php

```
<?php
include 'hconnect.php';
session_start();
$ah=$_SESSION['dd'];
$query=mysqli_query($con,"SELECT * FROM `tbl_register` WHERE `email`='$ah'");
while($row=mysqli_fetch_array($query)){
$uid=$row['id'];
if (isset($_POST['btn'])) {
    $pd=$_POST['pd'];
    $query = mysqli_query($con,"INSERT INTO `tbl_pickupdetails`( `uid`,
`pickupdate`, `pickuptime`, `pickupday`) VALUES
('$uid','$pd','Evening','Daily')");
    if($query){
        echo '<script type="text/javascript">';
        echo 'setTimeout(function () { swal("",Pickup details added
successfully","success");';
            echo '}, 1000);</script>';
    else
    {
        echo '<script type="text/javascript">';
        echo 'setTimeout(function () { swal("Pickup details not added
successfully","error");';
            echo '}, 1000);</script>';
    }
}
?>
<!DOCTYPE html>
<html lang="en" dir="ltr">
<head>
    <meta charset="UTF-8">
    <title> User Panel </title>
    <link rel="stylesheet" href="./css/style3.css">
    <!-- Boxiocns CDN Link -->
    <link href='https://unpkg.com/boxicons@2.0.7/css/boxicons.min.css'</pre>
rel='stylesheet'>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <link href="https://fonts.googleapis.com/icon?family=Material+Icons"</pre>
rel="stylesheet">
    <!--Bootstrap-->
    <link rel="stylesheet" type="text/css"</pre>
href="css/bootstrap/css/bootstrap.min.css">
```

```
<script src="https://code.jquery.com/jquery-3.2.1.slim.min.js"</pre>
integrity="sha384-
KJ3o2DKtIkvYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
crossorigin="anonymous"></script>
    <script
src="https://cdn.jsdelivr.net/npm/popper.js@1.12.9/dist/umd/popper.min.js"
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
    <script>src="https://cdn.jsdelivr.net/npm/bootstrap@4.0.0/dist/js/bootstra
p.min.js" integrity="sha384-
JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYl"
crossorigin="anonymous"></script>
    <!--Bootstrap js-->
    <script src="/css/bootstrap/js/bootstrap.min.js"></script>
    <script>src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/p
opper.min.js" integrity="sha384-
7+zCNj/IqJ95wo16oMtfsKbZ9ccEh31eOz1HGyDuCQ6wgnyJNSYdrPa03rtR1zdB"
crossorigin="anonymous"></script>
 <script>src=https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bu
ndle.min.js>integrity="sha384-
ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+1p"
crossorigin="anonymous">
    </script>
    <script src="jquery-3.3.1.min.js"></script>
  <script>src="https://cdnjs.cloudflare.com/ajax/libs/sweetalert/2.1.2/sweetal
ert.min.js></script>
    <style>
    .r {
        margin-left: 30px;}
    body {
        font-family: Arial, Helvetica, sans-serif;}
    /* Full-width input fields */
    input[type=text],
    input[type=date] {
        width: 100%;
        padding: 12px 20px;
        margin: 8px 0;
        display: inline-block;
        border: 1px solid #ccc;
        box-sizing: border-box;}
.request{
    padding: 2vw;
    display: grid;
    grid-template-columns: .3fr .2fr ;
grid-gap:1vw;}
    .rd,
    .day {
        margin: 8px 0;
```

```
padding: 12px 20px;
      border: 1px solid #ccc;
      box-sizing: border-box;}
  .details {
      position: absolute;
      top: 50%;
      left: 30%;
      margin: -25px 0 0 -25px;
      padding: 12px 20px;
      display: inline-block;
      border: 1px solid #ccc;
      box-sizing: border-box;
      display: block;}
  .details label {
      margin: 8px 0;
      padding: 12px 20px;
      border: 1px solid #ccc;
      box-sizing: border-box;
  }
  .opt1,
  .opt2 {
      margin-top: 10px;
      border: 1px solid #ccc;
      box-sizing: border-box;}
  input[type=submit]{
  background-color: #04AA6D;
      color: white;
      padding: 14px 20px;
      margin: 8px 0;
      left: 20vw;
      top: 5vw;
      border: none;
      cursor: pointer;}
     .sta {
      background-color: #04AA6D;
      color: white;
      padding: 14px 20px;
      margin: 8px 0;
      left: 20vw;
      top: 5vw;
      border: none;
  }
  @font-face {
font-family: 'Material Icons';
font-style: normal;
font-weight: 400;
src: url(https://example.com/MaterialIcons-Regular.eot); /* For IE6-8 */
src: local('Material Icons'),
  local('MaterialIcons-Regular'),
```

```
url(https://example.com/MaterialIcons-Regular.woff2) format('woff2'),
    url(https://example.com/MaterialIcons-Regular.woff) format('woff'),
   url(https://example.com/MaterialIcons-Regular.ttf) format('truetype');
}
   h3 {
        text-align: center;}
    button:hover {
        opacity: 0.8;
    .container {
        padding: 16px;
    }
    span.psw {
        float: right;
        padding-top: 16px;
    } /* The Modal (background) */
    .modal {
        position: relative;
        z-index: 1;
        top: 0;
        margin-left: auto;
        margin-right: auto;
        width: 50%;
        height: 100%;
        overflow: auto;
        padding-top: 60px;}
       .modal-content {
        background-color: #fefefe;
        margin: 5% auto 15% auto;
        border: 1px solid #888;
        width: 80%;}
    .animate {
        -webkit-animation: animatezoom 0.6s;
        animation: animatezoom 0.6s }
    @-webkit-keyframes animatezoom {
        from {
            -webkit-transform: scale(0)
        }
        to {
            -webkit-transform: scale(1)
        } }
    @keyframes animatezoom {
        from {
            transform: scale(0)
        }
        to {
            transform: scale(1)}}
    </style>
```

```
</head>
<body>
   <div class="sidebar close">
      <div class="logo-details">
          <img id="logo" src="./pic/logo.png" />
      </div>
      <1i>>
             <a href="#" class="active">
                <i class='bx bx-grid-alt'></i>
                 <span class="link_name">Dashboard</span>
             </a>
             <a class="link_name" href="#">Dashboard</a>
             <
             <a href="viewprofile.php" class="active">
             <i class='bx bx-user-circle'></i>
                 <span class="link_name">Profile</span>
             </a>
             <aclass="link name"href="viewprofile.php">Profile</a></l>
             <
             <a href="ucollectstatus.php" class="active">
             <i class='bx bx-trash'></i>
      <span class="link_name" href="paymentpage.php">Collection
Status</span>
             </a>
             <a class="link_name" href="ucollectstatus.php">Collection
Status</a>
             <
             <a href="paymentpage.php" class="active">
             <i class='bx bx-credit-card' style='color:#ffffff' ></i>
              <span class="link_name" href="paymentpage.php">Payment</span>
             </a>
             <a class="link_name" href="paymentpage.php">Payment</a>
             <
             <div class="profile-details">
                 <div class="profile-content">
                    <!--<img src="image/profile.jpg" alt="profileImg">-->
```

```
</div>
                    <div class="name-job">
   <div class="profile_name"><a href="logout.php" style="color:white;"><I</pre>
class='bx bx-log-out'></i>User</a></div></div>
         <img src="https://img.icons8.com/bubbles/100/000000/system-</pre>
administrator-female.png" />
                </div> 
    </div>
    <section class="home-section">
        <nav>
            <div class="home-content">
                <i class='bx bx-menu'></i>
                <span class="text">User Dashboard</span>
            </div>
            <h5 class="mt-3"><?php echo $ah; ?></h5>
        </nav>
        <div class="r mt-5 ">
            <div class="request">
                <h5 class="head">Request Status :</h5>
                <?php
                $query88=mysqli_query($con, "SELECT 'uid', `status`, `reason`
FROM `tbl userdetails` where `uid`='$uid'");
                while($row1 = mysqli_fetch_array($query88))
                $s=$row1['status'];
                $r=$row1['reason'];
                if($s==0){?}
                <button class="sta btn-sm" style="background-color:#ffc107;</pre>
color:white;">Pending</button>
                <?php }
                elseif($s==1)
                $query2=mysqli_query($con,"SELECT * FROM `tbl_pickupdetails`
WHERE `uid`='$uid'");
                if(mysqli_num_rows($query2)>0){
                     ?>
                <input type="submit" value="Accepted" class="sta btn-sm"</pre>
style="width:auto;"disabled/><br>
                 <?php
                }else{?>
                    <!--Bootstrap tooltip-->
                <script>
                $(function () {
                $('[data-toggle="tooltip"]').tooltip()
                })
                </script>
                     <input type="submit" value="Accepted"</pre>
toggle="tooltip" data-placement="bottom" title="Click the button for pickup
```

```
details" style="width:auto;"
onclick="document.getElementById('id01').style.display='block'"/><br>
               <?php }
               <?php}
               else{?>
  <button class="btn btn-danger btn-sm" style="width:auto;">Rejected
</button>
<h5 class="rr">Reason for rejection:<h5 style="margin-left: 0vw;"><?php echo</pre>
$r ?></h5><?php}?>
           </div>
       </div>
           <?php
               $res = mysqli_query($con,"SELECT `pickupdate`, `pickuptime`,
`pickupday` FROM `tbl_pickupdetails` where `uid`='$uid'");
               if(mysqli num rows($res)>0){
               if($row=mysqli_fetch_array($res))
               {
                            ?>
           <div class="details">
           <H3>PickUp Details</H3>
           PickUp Started Date:
                   <label><?php echo $row['pickupdate']?></label>
               PickUp Time:
                   <label><?php echo "Evening" ?></label>
               PickUp Days:
                   <label><?php echo "Daily" ?></label>
               <?php
               $qu=mysqli_query($con,"SELECT * FROM `payment`
WHERE `name`='$ah'");
               if (mysqli num rows($qu) > 0){
               while($row5=mysqli_fetch_array($qu)){
               $t=$row5['payment status'];
               }
               if($t=='pending'){?>
               <marquee ><a href="paymentpage.php"</pre>
style="color:#FF0000;">Advance Payment ₹500 is Pending </a></marquee>
               <?php }
               else{}
               }else{?>
               <marquee ><a href="paymentpage.php" style="color:#FF0000;">
Pay Advance Amount ₹500 </a></marquee>
               <?php
               }}}?>
```

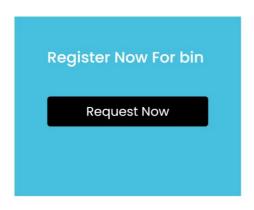
```
</div>
        <div id="id01" class="modal">
            <form class="modal-content animate" action="#" method="post">
                <div class="container">
                <span class="material-icons" id="cls" >close</span>
                    <h3> PickUp Details</h3><br>
                    <label for="uname"><b>PickUp Date</b></label>
     <input type="date" min=<?=date('Y-m-d');?> max='2045-01-01'
placeholder="Pickup date" name="pd" required> <br>
                    <label for="uname"><b>PickUp Time</b></label>
                    <div class="day">
                        <label style="color:gray;" >Evening</label>
                    </div>
                    <label for="uname"><b>PickUp days</b></label>
                    <div class="day">
                        <label style="color:gray;">Daily Collection</label>
                    </div>
                       type="submit" class="btn" name="btn" id="btn"></input>
              <input
                    </div></div>
            </form>
        </div>
        <script>
        var modal = document.getElementById('id01');
        window.onclick = function(event) {
            if (event.target == modal) {
                modal.style.display = "none";}}
        var close = document.getElementById('cls');
        window.onclick = function(event) {
            if (event.target == close) {
                model.style.display = "none";}}
        </script>
    </section>
    <script>
    let arrow = document.querySelectorAll(".arrow");
    for (var i = 0; i < arrow.length; i++) {</pre>
        arrow[i].addEventListener("click", (e) => {
            let arrowParent = e.target.parentElement.parentElement;
            arrowParent.classList.toggle("showMenu");
        });}
   let sidebar = document.querySelector(".sidebar");
   let sidebarBtn = document.querySelector(".bx-menu");
    console.log(sidebarBtn);
    sidebarBtn.addEventListener("click", () => {
        sidebar.classList.toggle("close");
    });
    </script>
</body>
</html>
```

SCREENSHOTS Home Page



Home About Contact Signup Login

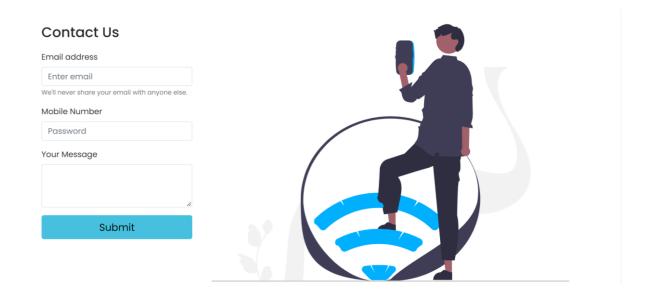




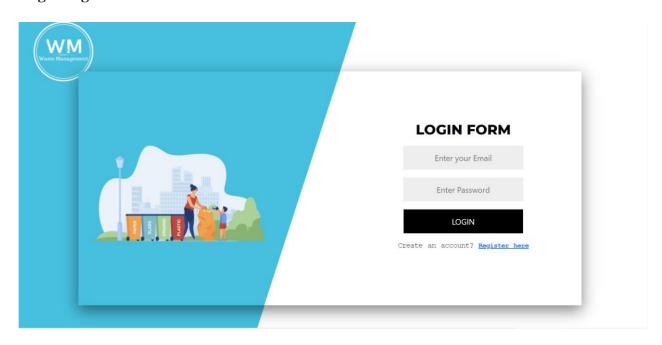
About

WM is a market platform where waste collected from all Apartments. We are really concerned with the environmental and social aspects. Our platform features a comprehensive recycling database that gives the user the ability to easily assemble a recycling to-do list; and it's all just one button click away.

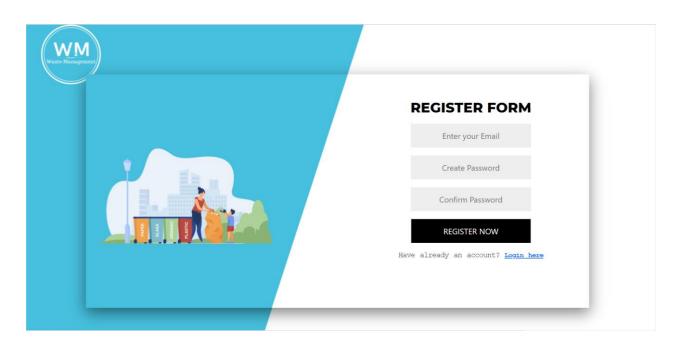




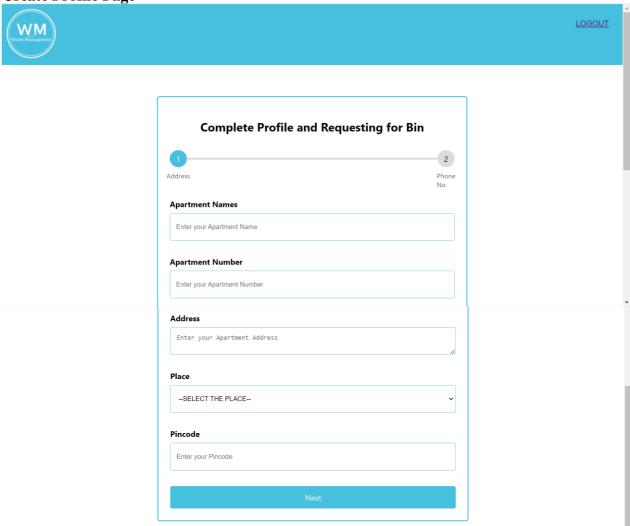
Login Page



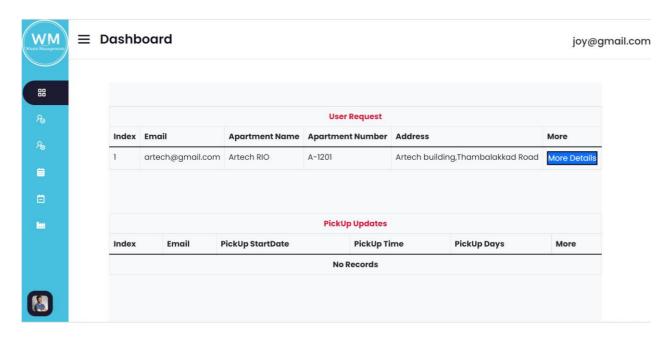
Registration Page



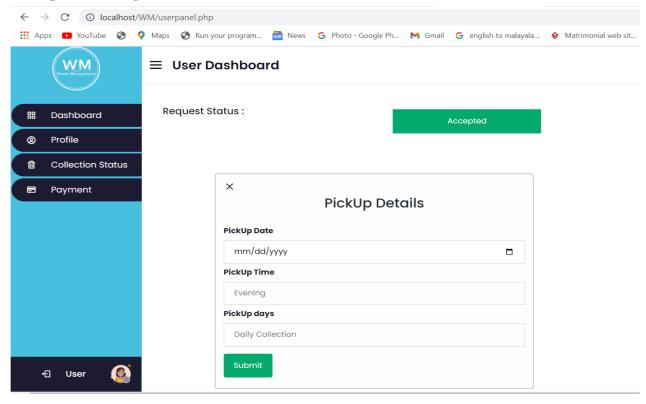
Create Profile Page



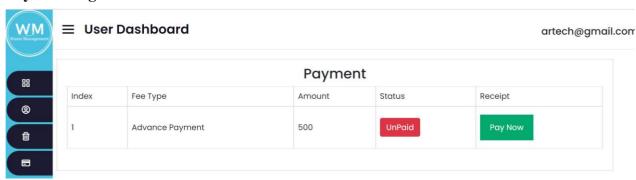
Staff Page



Pickup Details Page



Payment Page



Assign to driver page

