GARBAGE MANAGEMENT SYSTEM

MINI PROJECT REPORT

Submitted by

PON SWARNALAYA (18EUCS077)

RAHUL RAGAVENDER (18EUCS088)

RANJITH KUMAR (18EUCS091)

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(Approved by AICTE and Affiliated to Anna University, Chennai)
ACCREDITED BY NAAC WITH "A" GRADE

BONAFIDE CERTIFICATE

Certified that this mini project report titled **"GARBAGE MANAGEMENT SYSTEM"** is the Bonafide work of **"PON SWARNALAYA (18EUCS077) , RAHUL RAGAVENDER (18EUCS088) , RANJITH KUMAR (18EUCS091)"** who carried out the mini project work under my supervision.

SIGNATURE	SIGNATURE
Dr. K. SASI KALA RANI M.E., Ph.D.	**Mrs.R.Gowthamani.M.E.,(pH.D.)**
HEAD OF THE DEPARTMENT	**SUPERVISOR,**
	ASSISTANT PROFESSOR

Department of Computer Science and Engineering

Sri Krishna College of Engineering and Technology

Kuniamuthur,

Coimbatore.

This Mini Project report is submitted for Autonomous Mini Project Viva-Voice examination held on ……...

INTERNAL EXAMINER	**EXTERNAL EXAMINER**

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ABSTRACT

In this paper we have developed a low cost, low power garbage management system which will be applicable in every regions of your locality. This system enables us to collect the dumped trash from the requested area of the user.The second largest populated country in the world is India. Currently India faces various hindrances to its development. Solid Garbage Waste Management is of critical concern and needs more attention.Many developed countries are searching for ready-made sustainable waste management solutions. Developing Countries which has executed this type of web-app has typical problem areas such as inadequate interaction between public and waste transfer station and inadequate management of non-industrial hazardous waste and insufficient landfill disposal. In order to overcome this problems we have developed a web based application which provides an easiest interface platform between the common public and the waste transfer station of their respective locality. Public can also have option for picking the waste at that location at a given time of availability of the station vehicles. Proposed web-application will be useful for the station staff to access the waste without any rushing. Hence this web application can make our surroundings clean. Our project focuses to transfer the waste to the waste transfer station in Coimbatore locality. The future scope is to extend the database for a wide range of area.

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CHAPTER 1

1.INTRODUCTION

1.1 OVERVIEW

Web-based apps are accessible anywhere and anytime, as long as you have access to a device with an Internet connection. Since web-based apps can be run on any platform, you won't have to pay developers to create multiple versions of your program (for Mac OS and Windows, or for Android and IOS). Your single web-based application will be available to users of all mobile and desktop operating systems. Web-based software doesn't have to be installed and configured, so it's much easier to quickly increase the number of active users as opposed to desktop programs. What's more, modern Web servers perform extremely well even when faced with thousands of simultaneous requests, so expanding the network of Web app users is often possible without any additional software configuration or modification. The rubbish occupies much land. Garbage has taken in much precious soil resources and human's living spaces, which has seriously affected the development and growing of agriculture and industry. Large amount of waste has not only destroyed plants rooted on the earth surface, but also influenced the beauty of natural environment, and also broken ecological balance of nature. There are

many applications for the Garbage management system. This kind application is useful for collecting house-hold waste in a particular. Even though it has some application not our surroundings are not well cleaned. To make our society and surroundings clean we have developed this application. This application will be much helpful for one step development of our country.This application satisfies clean environment by the public interaction to the nearby waste transfer station. The implementation of this program has fundamentally solve the pollution caused by living waste,to protect the national soil resource. Therefore, carrying out this project not only can create economic benefit, but also bring realistic and long-term social benefits.The air, which is an unavoidable source of life, has been polluted with. chemicals, pathogens or offensive odour. Seepage from refuse dumps often pollutes the underground water and surface water. The environment is “sick” and the sickness is less than natural but the effect of human activities. In order to protect human health and the environment from the potential hazards of inappropriate waste disposal and environmental pollution a systematically supervised and controlled handling of these wastes is a must. The type of wastes which constitute environmental pollution which this work concentrates on is domestic refuse consisting of degradable food wastes, leaves, dead animals and non-degradable ones such as plastics, bottles, nylon, medical and hospital wastes, generated in households, hospitals, industries and commercial centers [4] . Waste is a

continually growing problem at global and local levels. Wastes arise from human and animal activities that are normally discarded as useless or unwanted. In other words, wastes may be defined as the organic and inorganic waste materials produced by various activities of the society and which have lost their value to the first user.

1.2 EXISTING SYSTEM

The five major problems identified by Schertenleib & Meyer (1992) in SWM in developing countries (inadequate coverage of the population to be served, operational inefficiencies of municipal SW services and management, limited utilization of the formal and in formal private sector in recycling activities, problems concerning the management of (non-industrial) hazardous waste and specific problems related to final disposal of solid waste) still exist to a large extent and need increased attention.uncontrolled dumping is still the most common way of waste disposal in cities of the developing world. However contamination of water resources and air pollution of such disposal sites and increased health risks of people living nearby are of growing concern.Many entities, public and private, have the responsibility for managing solid waste. These include state and local governments, the waste management industry, residents, manufacturers of products, retailers and other businesses, and environmental groups. An integrated waste management system is an

essential component of the infrastructure of a sustainable community. An integrated solid waste system protects public health, supports a vibrant economy, reduces emissions of air pollutants such as greenhouse gases, conserves energy and resources, and produces renewable energy. The solid waste management hierarchy emphasizes source reduction, reuse, recycling, organics recovery, and resource recovery over land disposal.

1.2.1 DRAWBACK:

- In the existing system the major drawback is inadequate reach of information to the transfer station. The major problems are unscientific treatment, improper collection of waste and ethical problems. This in turn leads to hazards like environment degradation, water pollution,soil pollution, and air pollution.
- Existing system has no proper time management. Lack of MSW management and disposal is leading to significant environmental problems, because the station vehicles face huge time issues.
- There is no clear vision on waste being collected from the respective areas complained by the users.

1.3 PROPOSED SYSTEM

The main drawback of the existing system is the reach of information to the respective station. Hence the proposed system provokes an interactive platform to overcome this discrepancy.In proposed system, user can directly submit the request that will be stored in the database ,which will be retrieved directly by the solid waste managing authority.The user can also pick the available time and date so that the station staff could manage their time easily.The major advantage of the proposed system is the time management along with soon garbage disposal.A transfer station is a facility where solid waste is unloaded from smaller trucks and reloaded into larger vehicles for transport to a final disposal site. Waste transfer stations make waste collection more efficient and reduce overall transportation costs, air emissions, energy use, truck traffic, and road wear and tear.

The Waste transfer stations in Coimbatore are:

- Goundampalyam SWM Transfer station.
- Peelamedu SWM Transfer station.
- Government Waste Transfer Station.
- Ukkadam SWM - Transfer station.
- RECYCLE NeX (E-Waste).
- Confident Engineering India Private Limited.
- Green Era Recyclers.
- Kovai Biowaste Management Pvt Ltd.

- Unwaste Network.

1.3.1 ADVANTAGES:

- The faster reach of information.
- Interactive platform.
- Time and date management along with flexibility of the station.
- Happy user.
- The information reaches the waste transfer station as soon as possible.

CHAPTER 2

2. REQUIREMENTS

2.1 SOFTWARE REQUIREMENTS:

2.1.1 FRONT END:

- HTML
- CSS
- PHP

2.1.2 BACKEND :

- FIREBASE

CHAPTER 3

3.MODULE DESCRIPTION

3.1 INTERFACE MODULE

In this module ,adopted for the design and implementation of the project includes: Design the project requirements, Selection of appropriate technology and Implementation of modules (Firebase, web-based Module).

3.1.1 USER FEATURES

- Users can enter the details from which place waste can b collected
- User can also enter date and time to picking the waste.

3.2 WEB-BASED MODULE

- A web application (or web app) is application software that runs on a web server, unlike computer-based software programs that are run locally on the operating system (OS) of the device. Web applications are accessed by the user through a web browser with an active internet connection. These applications are programmed using a client–server modeled structure—the user ("client") is

provided services through an off-site server that is hosted by a third-party. The general distinction between a dynamic web page of any kind and a "web app" is unclear. Web sites most likely to be referred to as "web applications" are those which have similar functionality to a desktop software application, or to a mobile app. HTML5 introduced explicit language support for making applications that are loaded as web pages, but can store data locally and continue to function while offline.

- Single-page applications are more application-like because they reject the more typical web paradigm of moving between distinct pages with different URLs. Single-page frameworks might be used to speed development of such a web app for a mobile platform.
- With this platform recently becoming very popular, this application will reach a lot of users who are communicating with each other. The user interactive design is simple and intuitive so that most users can easily use it for the first time.

3.3 FIREBASE MODULE

- Fire-base provides a real time database and back-end as a service. The service provides application developers an API that allows

application data to be synchronized across clients and stored on Fire-base's cloud. The company provides client libraries that enable integration with IOS, JavaScript, Java, Objective-C, Swift and Node.js applications. The database is also accessible through a REST API and bindings for several JavaScript frameworks such as AngularJS, React, Ember.js and Backbone.js.

- The REST API uses the Server-Sent Events protocol, which is an API for creating HTTP connections for receiving push notifications from a server. Developers using the real time database can secure their data by using the company's server-side-enforced security rules.Fire-base Storage provides secure file uploads and downloads for Fire-base apps, regardless of network quality. The developer can use it to store images, audio, video, or other user-generated content. Fire-base Storage is backed by Google Cloud Storage.

CHAPTER 4

4. DESIGN OF WEB-APPLICATION

4.1 OBJECTIVES:

- Provides an option to transfer the dumped garbage waste from the exact location.
- Provides flexible working and transportation.
- Provides access free platform for both the user and authorities of the respective station.

4.2 ARCHITECTURE:

USER MODULE:

- On the below (figure 0.1), if the user is new, he/she must sign-up with providing necessary details like Name, Mobile number, area/city name, password and confirm password to the system.
- Once user signed up, user can login using the phone number and the password and directed to the request page.
- If he/she is an existing user, user can login by the necessary details and directed to the page where the respective user can enter the name, mobile number, location to pick the garbage, pick the date

and time according the availability of the waste transfer station vehicle.

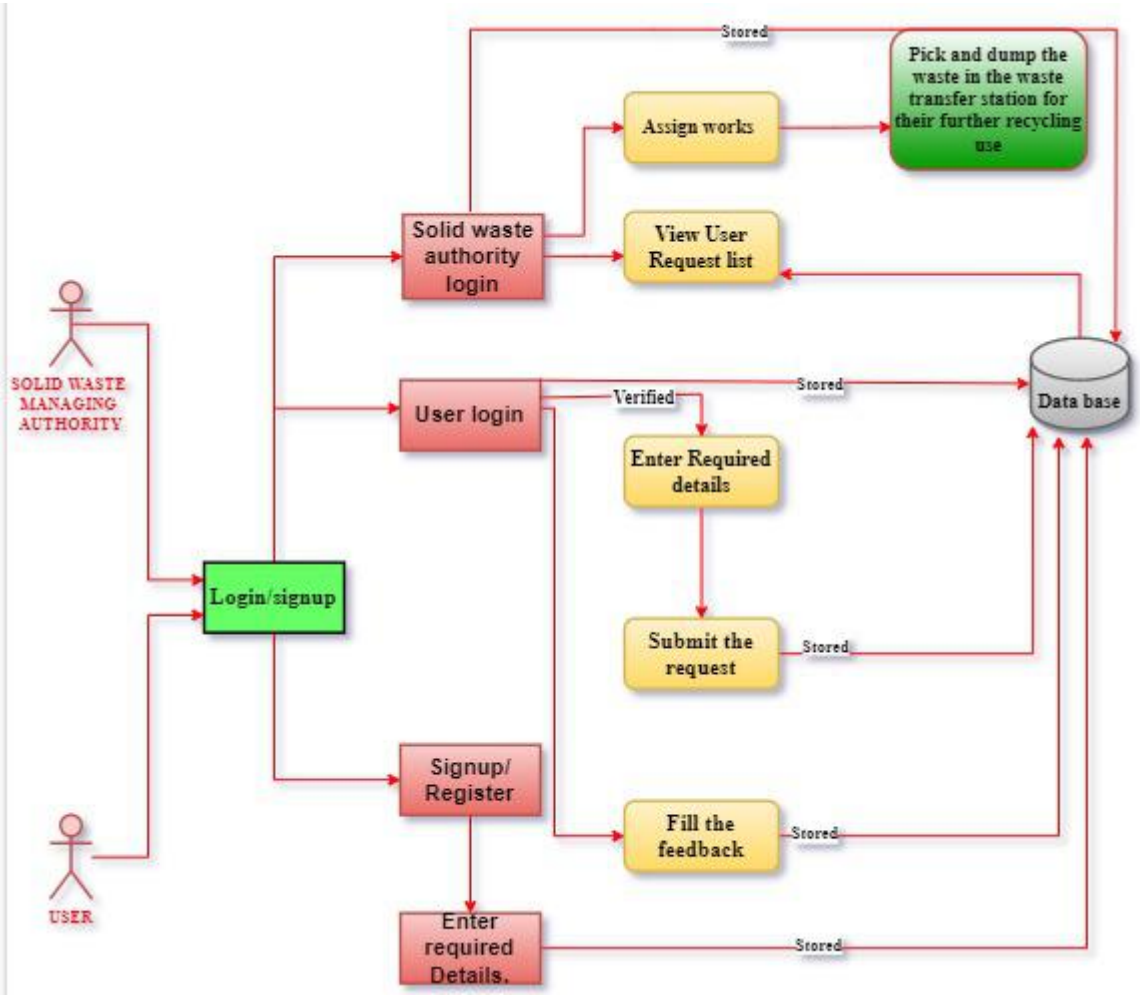
REQUEST SUBMISSION:

Once the user entered all the details user can submit the request and it can be stored the database.

SOLID WASTE MANAGING AUTHORITY:

- On the below (figure 0.1),solid waste managing authority shall have to sign up and login by station id and password.
- After login in, he/she will be able to view the retrieved list of user request from the database.
- According to the scheduled time, he/she can make the further processes such as assigning the waste transfer staff and vehicles for picking up the waste from the desired destination.

ARCHITECTURAL DIAGRAM:



(Figure 0.1)

CHAPTER 5

5. IMPLEMENTATION

5.1 FRONT-END:

- HTML
- CSS
- PHP

5.1.1 FEATURES:

- **Hypertext Markup Language** (**HTML**) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. Browsers do not display the HTML tags, but use them to

interpret the content of the page.HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997

- **Cascading style sheet(CSS)** is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language. The separation of HTML from CSS makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments.

- **PHP**

- PHP is an acronym for "PHP: Hypertext Preprocessor".
- PHP is a widely-used, open source scripting language.
- PHP scripts are executed on the server.
- PHP is free to download and use.

5.1.2 CODE:

USER:

```
<!DOCTYPE html>

<html lang="en">

<head>

   <meta charset="UTF-8">

   <meta name="viewport" content="width=device-width, initial-scale=1.0">

   <title>Document</title>

   <!-- <link rel="stylesheet" type="text/css" href="css/style.css"/> -->

</head>

<body>


      <h2 style="font-family: Verdana, Geneva, Tahoma, sans-serif;" >USER LOGIN</h2><br>

       <div class="login">

       <form id="login" method="get" action="login.php">

          <label><b>PhoneNumber

          </b>
```

```
</label>
<input type="text" name="Phnumber" id="Phname" placeholder="enter your number">
<br><br>
<label><b>Password
</b>
</label>
<input type="Password" name="Pass" id="Pass" placeholder="Password">
<br><br><br>
<input type="button" name="log" id="log" value="LOGIN">
<br><br>
<input type="checkbox" name="check" id="check">
<span>Remember me</span>
<br><br>
<a href="#">Forget Password</a>
<br><br>
<label><b>New User</b></label>
<br><br>
```

```
<button
onclick="document.getElementById('id01').style.display='block';">Si
gn Up</button>


<div id="id01" class="modal">

<span
onclick="document.getElementById('id01').style.display='none'"
class="close" title="Close Modal">&times;</span>

<form class="modal-content"
action="/action_page.php">

<div class="container">

<h1 style="color: white">Sign Up</h1>

<p>Please fill in this form to create an account.</p>

<hr>

<label for="Name" id="abc"><b>Name</b></label>

<input type="text" placeholder="Enter Name"
name="Name" required><br><br>


<label for="Phone number" id="abc"><b>Phone
Number</b></label>

<input type="Number" placeholder="Enter Phone number"
name="phnumbr" required><br><br>
```

```
<label for="psw" id="abc"><b>Password</b></label>

<input type="password" placeholder="Enter Password" name="psw" required><br><br>


<label for="psw-repeat" id="abc"><b>Repeat Password</b></label>

<input type="password" placeholder="Repeat Password" name="psw-repeat" required><br><br>


<label>

<input type="checkbox" checked="checked" name="remember" style="margin-bottom:15px"> Remember me

</label>


<div class="clearfix">

<button type="button" onclick="document.getElementById('id01').style.display='none'" class="cancelbtn">Cancel</button>
```

```
      <button type="submit"id="sub" class="signupbtn">Sign Up</button>

     </div><br><br><br><br><br><br><br><br>

     <label for="Area"><b>Area</b></label>

            <input type="text" placeholder="Enter Area/Locality" name="Area" required><br><br>

    </div>

   </form>

 </div>


 <script type="text/javascript">

  document.getElementById("sub").onclick = function () {

    window.location="D:/mini project/database connecting.html"

      alert("Registration Successfull");


  };</script>


<script>
```

```
var phoneNumber = document.getElementById("Phname");
var passWord = document.getElementById("Pass");
var loginBtn = document.getElementById("log");

loginBtn.addEventListener("click", function(){
var ph = phoneNumber.value;
var pw = passWord.value;
if(ph==="7708948020" && pw==="091")
{
   window.location="D:/mini project/database connecting.html";
}
else if(ph==="8903674742" && pw==="088")
{
   window.location="D:/mini project/database connecting.html";
}
else if(ph=="6369482320" && pw==="077")
{
   window.location="D:/mini project/database connecting.html";
}
```

```
    else{
        alert("Incorrect username or Incorrect password");
    }
      });
    </script>


    <script>
// var modal = document.getElementById('id01');



window.onclick = function(event) {
  if (event.target == modal) {
    modal.style.display = "none";
  }}
</script>
```

```
</body>
</html>
<style>
body
{
    margin: 0;
    padding: 0;
    font-family: 'Arial';
    background-image: url('https://www.greenjournal.co.uk/wp-content/uploads/2019/08/recycling.jpg');
    background-repeat: no-repeat;
    background-size: cover;


}
.login{
        width: 382px;
        overflow: hidden;
        margin-left: 900px;
        margin: 60 30 0 450px;
```

```
        padding: 80px;
        background-color:transparent;
        border-radius: 15px ;

}
h2{
    margin-left:72%;
    color:black;
    padding-top:-10px;
}
label{
    color:black;
    font-size: 17px;
}
#Phname{
    width: 300px;
    height: 20px;
    border-color: black;
    border-radius: 7px;
```

```
    padding-left: 8px;
    background-color: rgb(230, 229, 227);
}
#Pass{
    width: 300px;
    height: 20px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color:rgb(223, 221, 219);

}


#log{
    width: 150px;
    height: 30px;
    border-color:black;
    border-radius: 17px;
```

```
    padding-left: 7px;
    color:black;
    background-color: #ec8a5c;



}
span{
    color: rgb(14, 13, 13);
    font-size: 17px;
    float: left;
}
a{
    float: right;
    background-color: rgb(241, 248, 138);
}
#check{
    float: left;
}
```

```
input[type=text], input[type=password] {
  width: 50%;
  padding: 15px;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}

input[type=text]:focus, input[type=password]:focus {
  background-color: #ddd;
  outline: none;
}


button {
        width: 150px;
    height: 30px;
```

```
    border-color:black;
    border-radius: 17px;
    padding-left: 7px;
    color:black;
    background-color: #ec8a5c;

}

button:hover {
  opacity:1;
}

.cancelbtn {
  padding: 14px 20px;
  background-color: #f44336;
}
#abc{
  color: white;
}
```

```
.cancelbtn, .signupbtn {
  float: left;
  width: 50%;
}

.container {
  padding: 5px;
  }


.modal {
  display: none;
  position: absolute;
  left: 30%;
  top: 0%;
  width: 50%;
  height: 80%;
  overflow: auto;
  background-color: #474e5d;
```

```
  padding-top: 50px;
}


.modal-content {
  background-color: #fefefe;
  margin: 5% auto 15% auto;
  border: 0px solid #888;
  width: 150px;
}

hr {
  border: 1px solid #f1f1f1;
  margin-bottom: 25px;
}

.close {
  position: absolute;
  right: 35px;
```

```
  top: 15px;
  font-size: 40px;
  font-weight: bold;
  color: #f1f1f1;
}

.close:hover,
.close:focus {
  color: #f44336;
  cursor: pointer;
}

.clearfix::after {
  content: "";
  clear: both;
  display: table;



}
```

```
@media screen and (max-width: 300px) {
  .cancelbtn, .signupbtn {
     width: 100%;
  }
}
</style>
```

AUTHORITY:

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>G-SYSTEM</title>
   <link rel="preconnect" href="https://fonts.gstatic.com">
   <link href="https://fonts.googleapis.com/css2?family=Acme&display=swap" rel="stylesheet">
```

```
    <style>
    @import
url('https://fonts.googleapis.com/css2?family=Acme&display=swap');
    </style>
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <style>
      * {
        margin:0;
        padding:0;
        }</style>

    <!-- <link rel="stylesheet" type="text/css" href="css/style.css"/> -->
</head>
<body>
      <h1 style="font-family: Acme, sans-serif;">
      <body>
      <div style = "position:relative; left:970px; top:30px;" "width: 357;
         height: 50;
         font-size: 50pt;">
```

```
<p style = "color: #990066;""word-spacing:5px;""text-shadow:4px 4px 8px blue;"></></p><p style = "direction:rtl;"></p>

G-SYSTEM

</div>

</body></h1><br><br>

 <h2 style="font-family: Verdana, Geneva, Tahoma, sans-serif;" style="color:#FF0000;">AUTHORITY LOGIN</h2>

<div class="login">

<form id="login" method="get" action="login.php">

<label><b>Station Id

</b>

</label>

<input type="text" name="stationID" id="Phname" placeholder="Enter your stationID">

<br><br>

<label><b>Password

</b>

</label>

<input type="Password" name="Pass" id="Pass" placeholder="Password">
```

```
<br><br><br>

<a class="logg" href="https://garbage-management-b02af.firebaseio.com/" input type="button" name="logg" id="logg" value="logg">Login</a>

<br><br>

<input type="checkbox" name="check" id="check">

<span>Remember me</span>

<br><br>

<br>

<button class="button">Forget Password</button>

<form action="action_page.php" style="border:1px solid #ccc">

<div class="container">

<h3 style="font-family: Verdana, Geneva, Tahoma, sans-serif;" style="color:#FF0000;">SIGN UP</h3><br>

<p style="font-family: Verdana, Geneva, Tahoma, sans-serif;" style="color: black;">New Managing Authority</p>

<hr>

<label for="name"><b>Name</b></label><br>
```

```
<input type="text" placeholder="Enter Name" id="Phname" name="name" required><br>

<br><br>

<label for="psw"><b>Password</b></label>

<input type="password" placeholder="Enter Password" id="Phname"name="psw" required><br>

<br><br>

<label for="psw-repeat"><b>Repeat Password</b></label>

<input type="password" placeholder="Repeat Password" id="Phname" name="psw-repeat" required><br>

<br><br>

<label for="Station Address"><b>Station Address</b></label>

<input type="stationaddress" placeholder="Station Address" id="Phname" name="stationaddress" required><br>

<br><br>

<label for="Station Id"><b>Station ID</b></label>

<input type="station id" placeholder="Station ID" id="Phname" name="stationID" required><br>

<br><br>

<label for="phoneNumber"><b>Phone number</b></label>
```

```
            <input type="PhoneNumber" placeholder="Enter phoneNumber" id="Phname" name="number" required><br>

            <br><br>

             <input type="button" name="log" id="log" value="Signup"><br><br>

             <input type="button" name="log" id="can" value="Cancel">

          </form> </div>

</form>

</form>

<script>

   var stationID = document.getElementById("stnid");

   var passWord = document.getElementById("Pass");

   var loginBtn = document.getElementById("log");



   loginBtn.addEventListener("click", function(){

   var stationID = stationid.value;

   var pw = password.value;

   if(stationID==="stationI" && pw==="088")
```

```
    {


        window.location="https://garbage-management-
b02af.firebaseio.com/";
    }
    else if(stationID==="stationD" && pw==="077")
    {
        window.location="https://garbage-management-
b02af.firebaseio.com/";
    }
    else if(stationID==="stationK" && pw==="091")
    {
        window.location="https://garbage-management-
b02af.firebaseio.com/";
    }
    else{
        alert("Incorrect username or Incorrect password");
    }
      });
```

```
    var Name = document.getElementById("name");
    var Password = document.getElementById("pws");
    var Repeatpassword = document.getElementById("rpws");
    var Stationaddress = document.getElementById("stadd");
    var StationID = document.getElementById("stid")
    var PhoneNumber= document.getElementById("Phnumber");
    var signupBtn = document.getElementById("signup");


    signupBtn.addEventListener("click", function()
       {
    var Name = name.value;
    var pws = passWord.value;
    var repeatpw = repeatpassword.value;
    var stationaddress = stationaddress.value
    var stationid = stationid.value
    var Ph = phoneNumber.value;
    if(Name===" " || pw===" " || repeatpw===" " || stationAddress===" 
" || stationid===" " || ph===" ")
    {
```

```
        alert("Insufficient Details");
    }
    else
    {
         window.location="https://garbage-management-
b02af.firebaseio.com/";
    }
     });



    </script>
<script type="text/javascript">
    document.getElementById("log").onclick = function () {
        alert("Registration successful")
        location.href = "https://garbage-management-
b02af.firebaseio.com/";


    };</script>
</body>
```

```
</html>


<style>
body
{
    margin: 0;
    padding: 0;
    font-family: 'Arial';
    background-image: url("https://images.template.net/wp-content/uploads/2016/04/25103502/HD-Featured-Image.jpg");
    background-repeat: no-repeat;
    background-size: cover;
    float:left;


}
.login{
        width: 382px;
        overflow: hidden;
        margin-left: 800px;
```

```
        margin: 60 30 0 450px;
        padding: 80px;
        background-color:transparent;
        border-radius: 15px ;

}
.button {
  background-color: #008CBA;
  border: 2px solid #008CBA;
  color: white;
  padding-left: 12px 20px;
  text-align: center;
  text-decoration: none;
  display: inline-block;
  font-size: 15px;
  margin: 6px 4px;
  cursor: pointer;
}
```

```
h2{
    margin-left:72%;
    color:black;
    padding-top:-10px;
}
label{
    color:black;
    font-size: 17px;
}
#Phname{
    width: 300px;
    height: 30px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(230, 229, 227);
}
#Pass{
    width: 300px;
```

```
    height: 30px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color:rgb(223, 221, 219);

}
#can
{
    font-weight: bold;
    width: 150px;
    height: 30px;
    border-color:black;
    border-radius: 17px;
    padding-left: 7px;
    color:black;
    background-color: #ec8a5c;
```

```
}

#log{
    font-weight: bold;
    width: 150px;
    height: 30px;
    border-color:black;
    border-radius: 17px;
    padding-left: 7px;
    color:black;
    background-color: #ec8a5c;



}
#logg{
    text-align: center;
    font-family: Acme, sans-serif;
    font-size:20px;
    width:150px;
```

```
    height:30px;
    border-color: white;
    border-radius: 17px;
    padding-left: 7px;
    color:black;
    background-color: #ec8a5c;
    }
span{
    color: rgb(14, 13, 13);
    font-size: 17px;

}
a{
    float: right;
    background-color: rgb(241, 248, 138);
}
#check{
    float: left;
}</style>
```

5.2 BACK-END:

- Fire-base

5.2.1 FEATURES:

- Fire-base is a framework which is help for building portable and web application for your business with real-time database which implies when one user updates a record in the database, that update would be conveyed to every single user, be those users on a website, IOS or Android device. It gives a basic and unified platform with so many Google features packed-in. You don't need to configure your server when you use Fire-base. Everything will be taken care of by Fire-base automatically.
- There are numerous elements that make working with Fire-base marvelous from a developer's point of view, that pertain to the core technology of development. This helps in maintaining the state of harmony between the developer & the client by causing minimal delay of wor**k.**

5.2.3 CODE:

```
<html>
   <head>
   </head>
   <body>
```

```
<marquee> <p style="background-color: white;">ASSISTANCE REQUESTING PAGE </p></marquee>
<br><br><br><br>
<center>
<input id="namebox" type="text" placeholder="Enter your NAME"></input> <br><br><br>
<input id="phonebox" type="text"placeholder="Enter your Phonenumber"></input> <br><br><br>
<input id="areabox" type="text"placeholder="Enter your Address"></input> <br><br><br>

<input type="date" id="Date" name="Date"placeholder="Date"><br><br>

<input type="time" id="time" name="time"placeholder="time">
<br><br><br>
<button id='insert'>ADD</button>
<button id='sub'>SUBMIT</button>
</center>

<script src="https://www.gstatic.com/firebasejs/8.0.2/firebase-app.js"></script>
```

```
    <script src="https://www.gstatic.com/firebasejs/8.0.2/firebase-auth.js"></script>
    <script src="https://www.gstatic.com/firebasejs/8.0.2/firebase-database.js"></script>

    <script id="MainScript">
        var firebaseConfig = {
          apiKey: "AIzaSyAAP38kB_yGDKBazSZguBooYQB5lKKId1E",
          authDomain: "garbage-management-b02af.firebaseapp.com",
          databaseURL: "https://garbage-management-b02af.firebaseio.com",
          projectId: "garbage-management-b02af",
          storageBucket: "garbage-management-b02af.appspot.com",
          messagingSenderId: "10045585021",
          appId: "1:10045585021:web:417ad00c0a9cdbc7f86314"
        };
        firebase.initializeApp(firebaseConfig);
//------------------Ready Data-----------------------------------//
var nameV, phoneV, areaV,timeV,dateV;

function Ready(){
   nameV = document.getElementById('namebox').value;
   phoneV = document.getElementById('phonebox').value;
```

```
    areaV = document.getElementById('areabox').value;
    timeV = document.getElementById('time').value;
    dateV= document.getElementById('Date').value;

}
//--------------------Insert Process----------------------------------//
    document.getElementById('insert').onclick = function(){
        alert("Request sent");
        Ready();
        firebase.database().ref('public/'+phoneV).set({
            Name: nameV,
            PhoneNumber: phoneV,
            Area: areaV,
            Time:timeV,
            Date:dateV,
        });
    }

//-------------------Deletion   Process-----------------------------------
-----//
    document.getElementById('delete').onclick = function(){
        Ready();
        firebase.database().ref('public/'+phoneV).remove();
        }
```

```
        </script>
        <script type="text/javascript">
            document.getElementById("sub").onclick = function () {

                location.href = "thankyou.html";

            };</script>
    </body>
</html>

<style>
   #namebox {
    width: 300px;
    height: 50px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(230, 229, 227);
}
#phonebox{

    width: 300px;
    height: 50px;
    border-color: black;
```

```
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(230, 229, 227);
}
#areabox{

    width: 300px;
    height: 50px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(230, 229, 227);
}
body{
    margin: 0;
    padding: 0;
    font-family: 'Arial';
    background-image:                    url("https://images.wsj.net/im-
148147?width=1260&size=1.5");
    background-repeat: no-repeat;
    background-size: cover;

}
#Date{
```

```
    width: 300px;
    height: 50px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(230, 229, 227);
}
label{
    font-size: larger;

}
#time
{
    width: 300px;
    height: 50px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(230, 229, 227);
}
#insert{

    width: 100px;
    height: 50px;
```

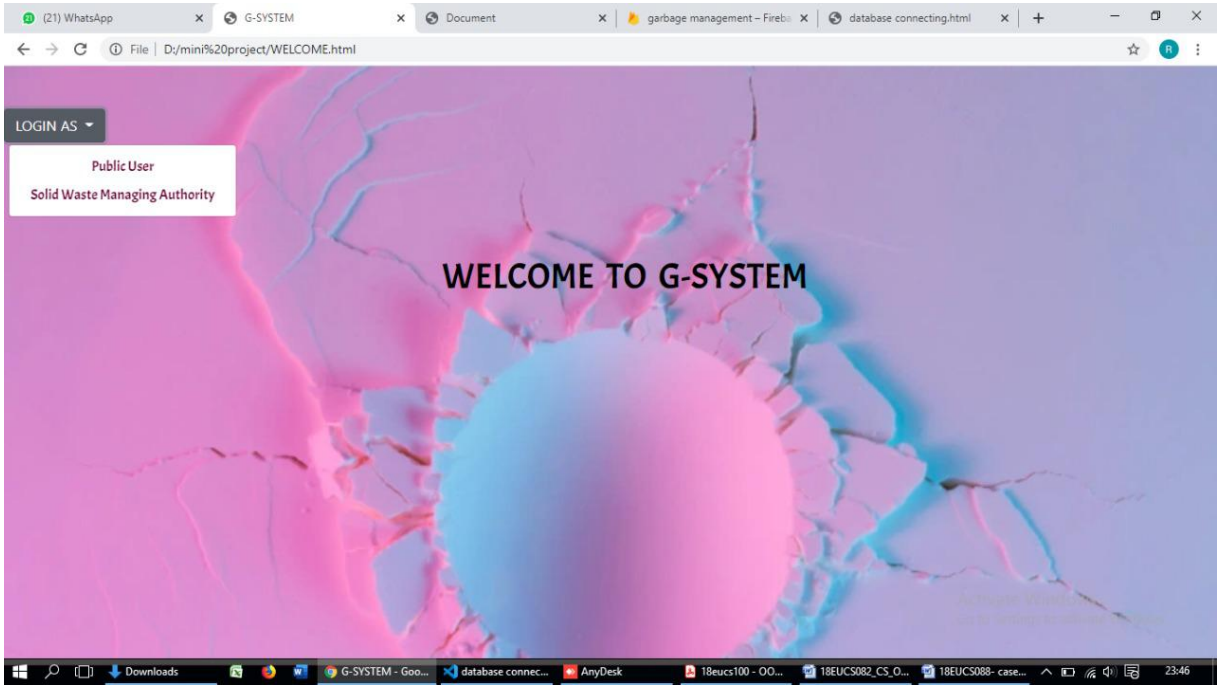
```
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(233, 252, 65);
}
#sub{

    width: 100px;
    height: 50px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(233, 252, 65);
}
#delete{

    width: 100px;
    height: 50px;
    border-color: black;
    border-radius: 7px;
    padding-left: 8px;
    background-color: rgb(95, 243, 120);
}
p{
```

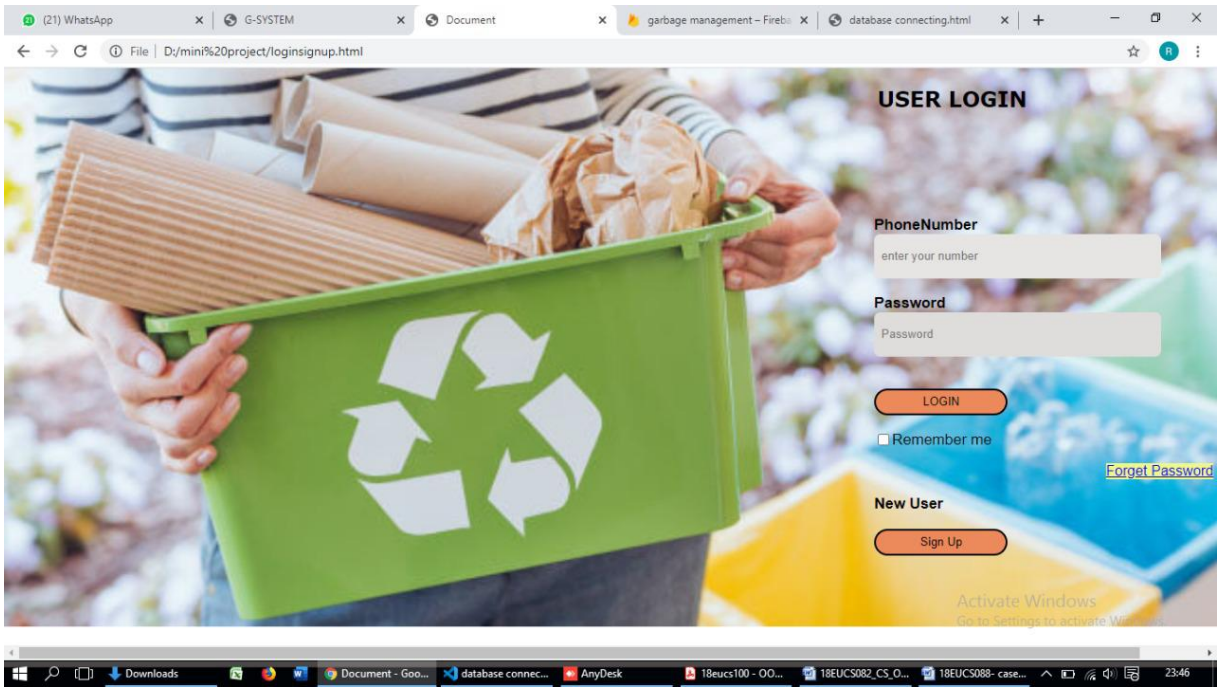
```
    /* font-family: Verdana, Geneva, Tahoma, sans-serif; */
    font-size: 35px;
}
#body
{
    margin: 0;
    padding: 0;
    font-family: 'Arial';
    background-image:                    url("https://images.wsj.net/im-
148147?width=1260&size=1.5");
    background-repeat: no-repeat;
    background-size: cover;

}
</style>
```

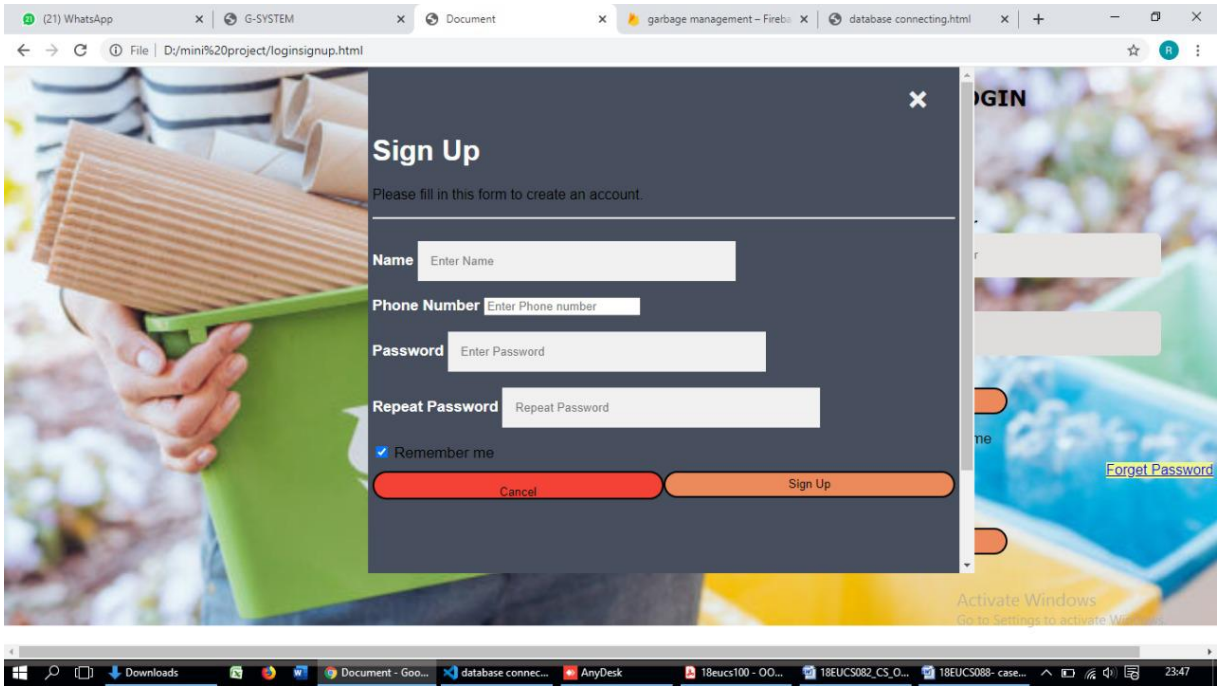
CHAPTER 6

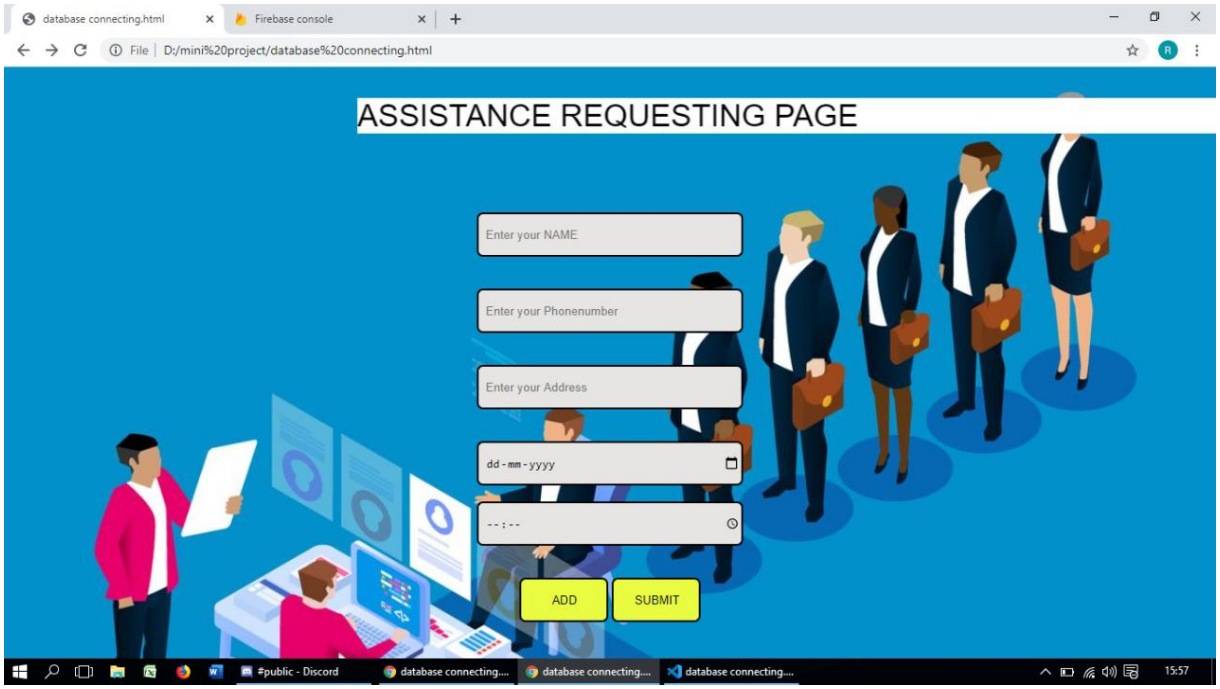
6. SCREENSHOTS

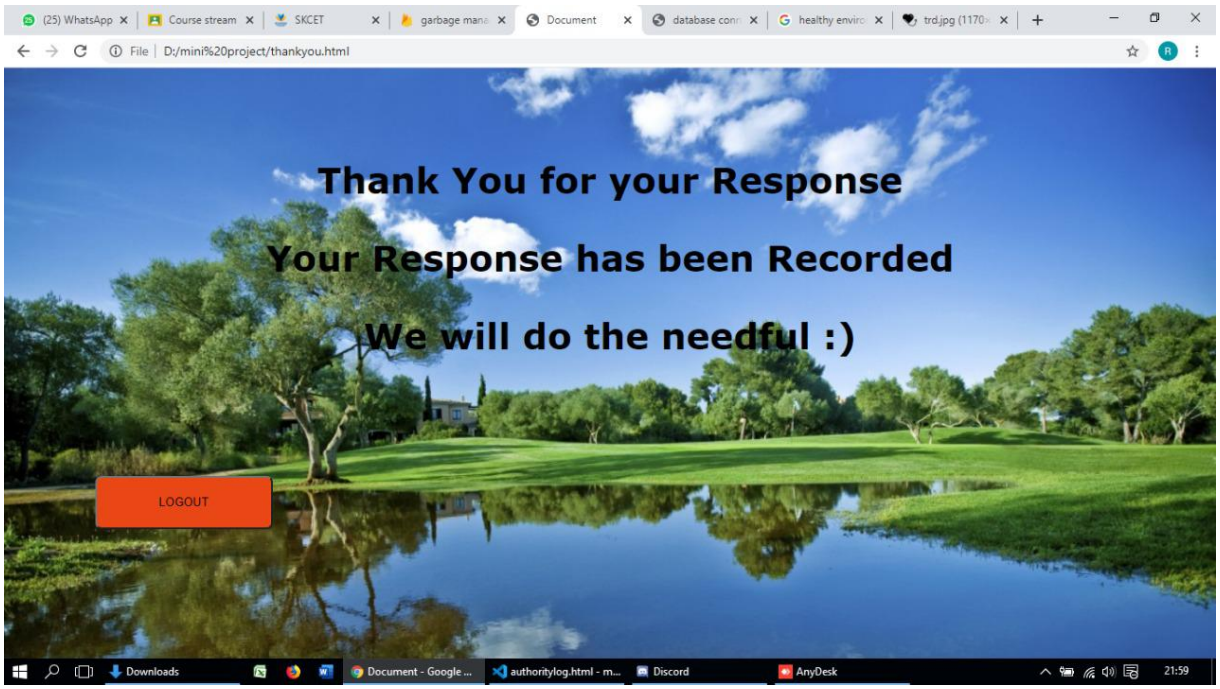
6.1 Front-end:

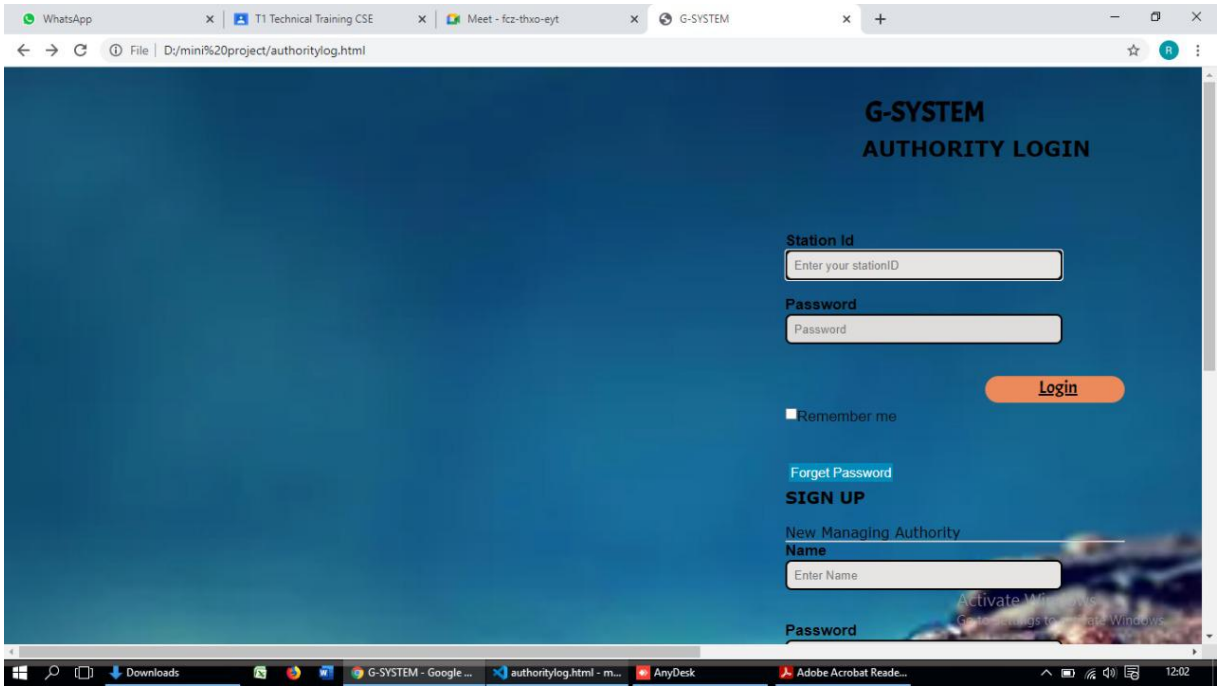




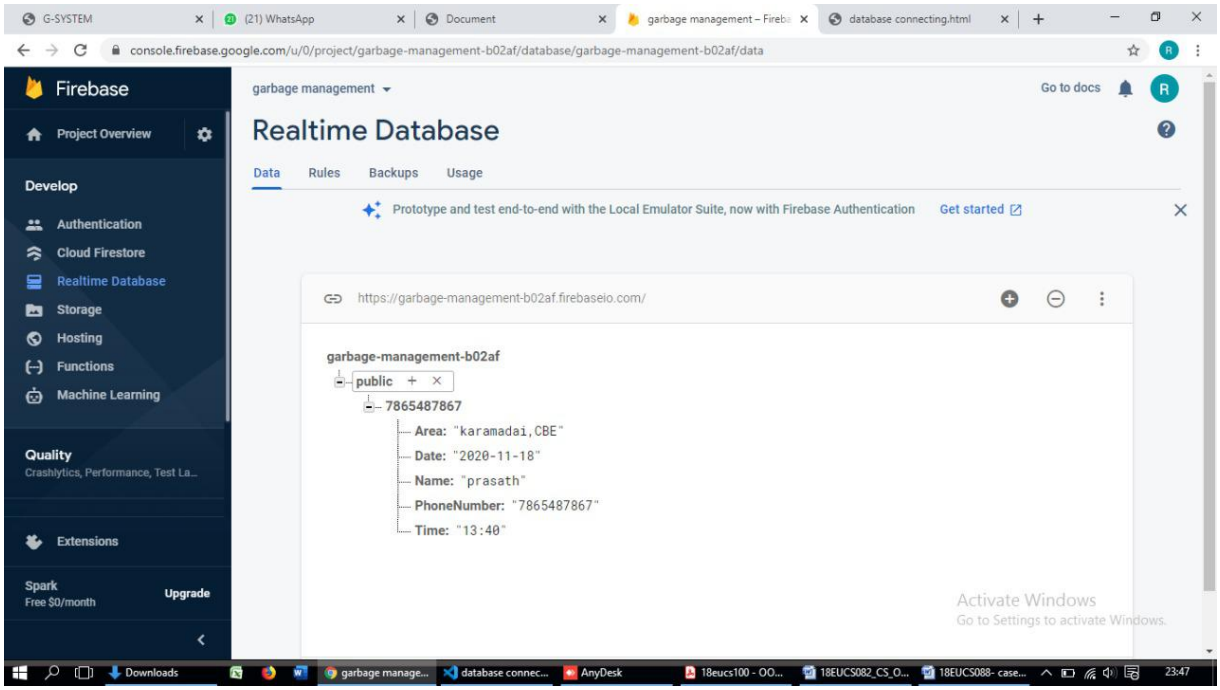

(21) WhatsApp
G-SYSTEM
Document
garbage management – Firebase
database connecting.html
File | D:/mini%20project/loginsignup.html
Sign Up
Please fill in this form to create an account.
Name
Enter Name
Phone Number
Enter Phone number
Password
Enter Password
Repeat Password
Repeat Password
Remember me
Cancel
Sign Up
Forget Password
Activate Windows
Downloads
Document - Goo...
database connec...
AnyDesk
18eucs100 - OO...
18EUCS082_CS_O...
18EUCS088- case...
23:47


database connecting.html
Firebase console
File | D:/mini%20project/database%20connecting.html
ASSISTANCE REQUESTING PAGE
Enter your NAME
Enter your Phonenumber
Enter your Address
dd-mm-yyyy
--:--
ADD
SUBMIT
#public - Discord
database connecting....
database connecting....
database connecting....
15:57


Thank You for your Response
Your Response has been Recorded
We will do the needful :)
LOGOUT


G-SYSTEM
AUTHORITY LOGIN
Station Id
Enter your stationID
Password
Password
Login
Remember me
Forget Password
SIGN UP
New Managing Authority
Name
Enter Name
Password

6.2 Back-end :


G-SYSTEM
(21) WhatsApp
Document
garbage management – Firebase
database connecting.html
console.firebase.google.com/u/0/project/garbage-management-b02af/database/garbage-management-b02af/data
Firebase
Project Overview
Develop
Authentication
Cloud Firestore
Realtime Database
Storage
Hosting
Functions
Machine Learning
Quality
Crashlytics, Performance, Test La...
Extensions
Spark
Free $0/month
Upgrade
garbage management
Go to docs
Realtime Database
Data
Rules
Backups
Usage
Prototype and test end-to-end with the Local Emulator Suite, now with Firebase Authentication
Get started
https://garbage-management-b02af.firebaseio.com/
garbage-management-b02af
public
7865487867
Area: "karamadai,CBE"
Date: "2020-11-18"
Name: "prasath"
PhoneNumber: "7865487867"
Time: "13:40"
Activate Windows
Go to Settings to activate Windows.
Downloads
garbage manage...
database connec...
AnyDesk
18eucs100 - OO...
18EUCS082_CS_O...
18EUCS088- case...
23:47

CHAPTER 7

7.TESTING

7.1 INTRODUCTION:

Software testing is the process of verifying a system with the purpose of identifying any errors, gaps or missing requirement versus the actual requirement. Software testing is broadly categorised into two types - functional testing and non-functional testing. Testing should be started as early as possible to reduce the cost and time to rework and produce software that is bug-free so that it can be delivered to the client. However, in Software Development Life Cycle (SDLC), testing can be started from the Requirements Gathering phase and continued till the software is out there in productions. It also depends on the development model that is being used.The testing model which is used in the proposed system is agile-model. Agile methodology is a practice that promotes continuous iteration of development and testing throughout the software development life-cycle of the project. In the Agile model, both development and testing activities are concurrent, unlike the Waterfall model.

7.2 TEST CASE:

First the web application is being tested for the redirection of the respective login page from the welcome page. Once the user/authority is been directed to the login page where they are provided with the existing fields to be filled by the user/authority. If the entered details for the sign-up of the user/authority is insufficient or the user/authority seems to have unfilled fields, user/authority will shown an alert message to fill the fields out. If the entered details for the login is not similar to the details that they have entered during the sign-up session then user/authority will shown with incorrect username status.

Once the user has logged in and entered the sufficient details needed for the request submission without leaving out any field provided then the request is subjected to the database. The user will be directed to the thank you page.The requests submitted by the user shall be viewed by the authority once after logged in.

Table 7.2.1

TEST	TEST DESCRIPTION	EXPECTED RESULT	TEST RESULT
1	Test the application when the user clicks Login as.	Directed to the user login page.	**Pass**

2	Test the application when the Solid waste authority clicks the Login as.	Directed to the authority login page.	**Pass**
3	Test the application when the public user clicks Sign-up.	Directed to the request submission page.	**Pass**
4	Test the application when the authority clicks Sign-up.	Directed to the database.	**Pass**
5	Test the application when the user clicks Login.	Directed to the request submission page.	**Pass**
6	Test the application when the authority clicks Login.	Directed to the database.	**Pass**
7	Test the application when the user clicks Submit.	Requests are recorded/stored in the database.	**Pass**
8	Test the application when the user clicks Logout.	Directed to the welcome page.	**Pass**

8 CONCLUSION:

Our web-app brings out the Garbage Management System for the quality

diagnosis and execution. Since web based application is user friendly, our

application allows the user to send their respective location and request message

to the Waste Transfer Station and initiated as a to-do list to the workers. They

can collect the waste and can use it for recycle purpose. The 3-R method of

waste control is an example:

i. reduce – reduce the amount of waste generated

ii. reuse – making by product of particular processes reusable

iii. recycle – and also recycling the abandoned part to produce new

equipments.

The aim of the 3-R method of waste management is to extract the maximum

practical benefits from all generated waste products and so have to bother with

minimum amount . Garbage Management system (GMS) can be a powerful

tool for any business seeking to monitor its environmental impact and maximize

profit by curbing needless waste and managing risk. Our idea satisfies to

provide clean environment by the public interaction to the nearby waste transfer

station. The implementation of this program has fundamentally solve the

pollution caused by living waste,to protect the national soil resource.Carrying

out this project not only can create economic benefit, but also

bring realistic and long-term social benefits.