



DATABASE MANAGEMENT SYSTEMS PROJECT ON MUNICIPAL E-GOVERNANCE

Karthik M (15CO221), Tarun Karthik (15CO155)

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL



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Municipal e-Governance Database Management System Project

About

e-Governance is a form of public administration making use of information and communication technologies to enhance the access and delivery of government services to benefit citizens, employees and management of urban local bodies. It aims to help strengthen government's drive toward effective governance and increase transparency to better manage social and economic resources for development.

Necessity

- Manual recording of data is time consuming and prone to error
- To avoid manual filing of application for trade, birth & death registration, etc.
- Huge potential for data manipulation and human errors.
- No centralized database in place.
- Search and retrieval of data becomes difficult.

Objectives

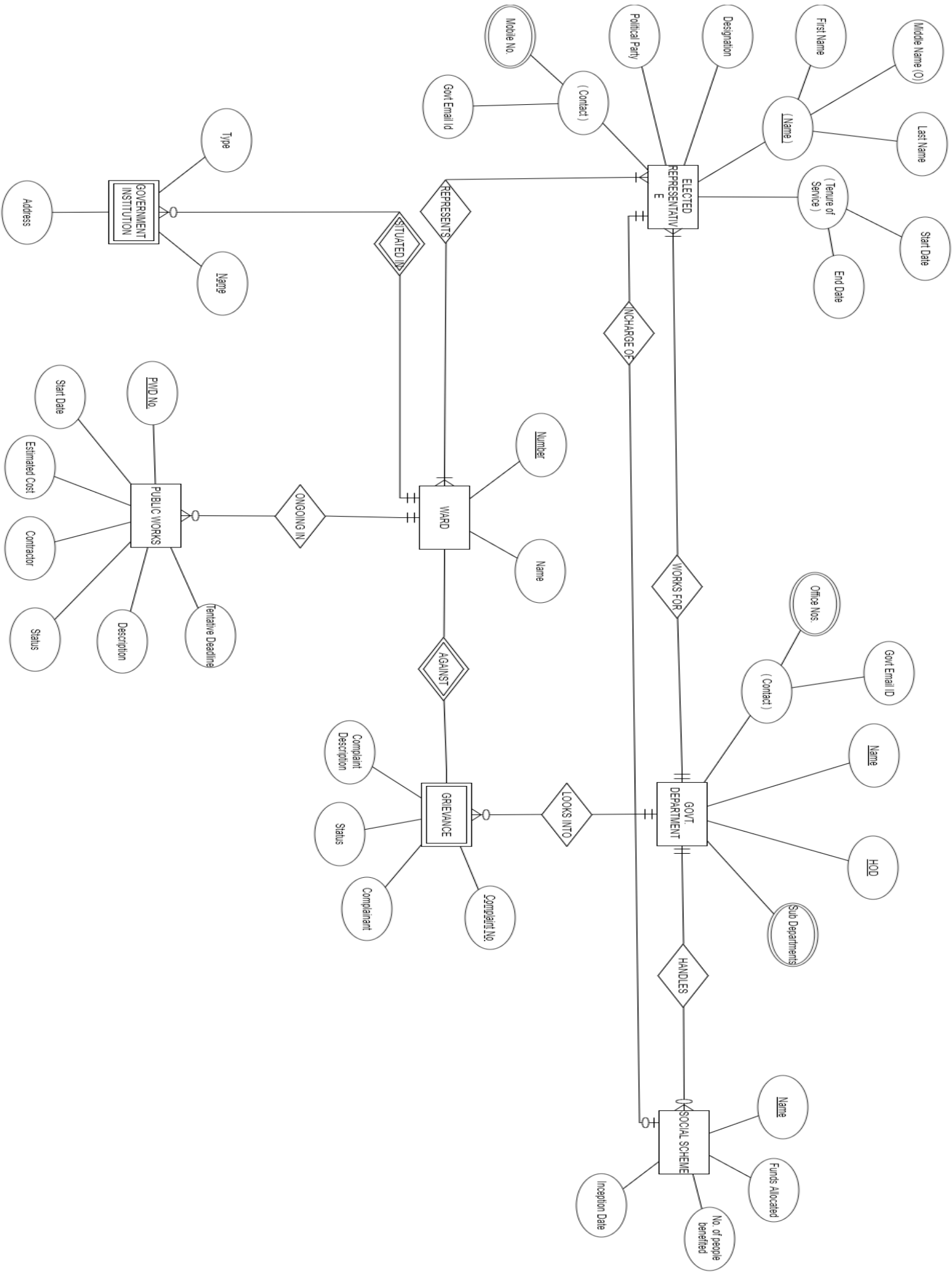
- Promote people centric administration
- Changing from age-old methods of book and pen to computer based governance
- Improving quality of city governance
- Systematically improve administration in terms of record keeping, searching, storing and processing records
- Track the progress of various wards based on metrics
- Provide a website for the corporation/municipality

- Improve accountability of government towards citizens

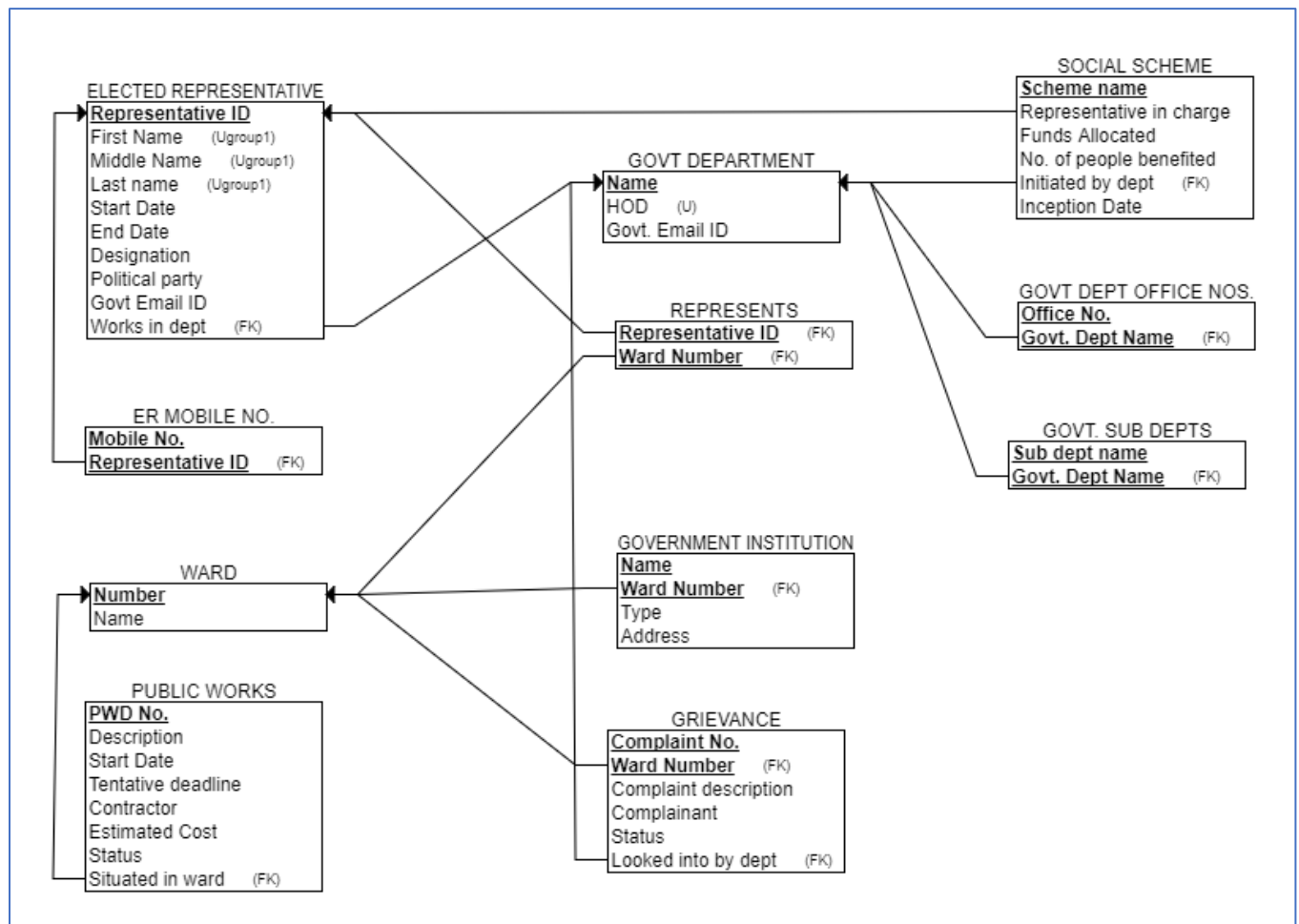
Requirements Specification

- A municipality has many wards, each identified by a ward number and a ward name.
- Every elected representative of the municipality has a first name, an optional middle name and last name. He/she has a designation (Corporator/MLA/MP) and is affiliated to a political party (BJP/Congress). He/she has a fixed term marked by a start date and an end date. An elected representative can have many wards under his/her jurisdiction (e.g.: A corporator has exactly one ward, an MLA has more than one ward and an MP has many wards under his jurisdiction). Thereby, a ward can have more than one elected representative in-charge of it. Every elected representative has an official e-mail ID provided by the government and may possess multiple mobile numbers
- A municipal corporation has many departments. Every govt. department has its own HOD and a department name. Each department can have further sub-departments (e.g.: The Health department can have sub-departments like Food Licenses Unit, Registration of Birth and Death, Communicable Disease Control, etc.). Every department is given an official govt. Email ID and can have multiple office numbers. More than 1 elected representative can work for a govt. Department but every govt. department should have at-least one elected representative
- There can be many social schemes run by the government in the municipality. Each scheme has a unique name and an inception date. The database should keep track of the funds allocated and the number of people benefited by the scheme. Each scheme should have one elected representative in-charge of it.
- The municipal corporation can run many government institutions like schools, colleges, hospitals. A ward can have many govt. Institutions and each Government institution can be uniquely identified by its name and the ward that it is situated in.
- Also, there can be many public works going in each ward (e.g.: roads, railways, bridges, parks, electrical grid, etc.). Each public work is identified by a unique PWD No. and has a tentative deadline set by the contractor, an estimated cost and a qualitative status (not started, ongoing, nearing completion, completed)
- The public can voice their grievances which will be looked into by a govt. Department. Each grievance will be uniquely identified in a ward by a complaint number. The complainant name and the status (grievance redressed or not) are also to be recorded.

Conceptual Schema (ER Diagram)



Relational Schema



Normalization of the relational schema

The mapping of the conceptual schema to the relation schema produced relations where every functional dependency $X \rightarrow Y$ of relation R was such that X is a primary key of R . In other words, the relational schema is already BCNF normalized without any non-trivial functional dependencies originating from non-prime attributes of the relational schema.

Specific Functional Requirements

A tentative list of database users and their interactions with the database in the form of input, processing, output has been presented here.

Database Administrator

- 1) Add details of an elected representative

Input: Elected representative name (first name, middle name, last name), start date and end date of service, designation, political party, contact (mobile no., govt. email-ID)

Processing: Add details of representative into the database

- 2) Add wards

Input: Ward name, ward no.

Processing: Add details of ward to the database

- 3) Add government departments

Input: Department name, department HOD

Processing: Add details of govt. department to the database

Public

- 1) Submit a grievance

Input: Complaint description, complainant name, (complaint against) ward number

Processing: Generate a complaint number, set "Status" as NULL and store the submitted details in the database

- 2) View status of a grievance

Input: Ward no., complaint no.

Processing: Fetch details regarding the complaint

Output: Display complaint details

- 3) View ward-wise details of grievances

Input: Ward no.

Processing: Select all grievances with the given ward no.

Output: Display the list of grievances with the given ward no.

VIEW WARD-WISE GRIEVANCES

Ward No

4 ▼

Submit

Complaint No	Complaint Description	Complainant
1	Illegal construction and road cutting on 4th cross, 2nd main, balaji layout, Vajarahalli, kanakapura road, Bangalore. Ward no.198 hemmigepura. No action taken by BBMP officials inspite of frequent complaints	Kiran Jathar

4) View list of all elected representatives in the municipality

Input: Select “View all representatives”

Processing: Retrieve details of all elected representatives

Output: Display all representatives of the municipality

Elected Representatives:

Display Elected Representatives

First Name	Middle Name	Last Name	Start Date	End Date	Designation	Political Party	Representative ID	Govt Email ID	Works in Dept
Chandramma		Kempegowda	2014-05-02	2019-05-02	Corporator	BJP	1	chandramma@bbmpcorp.com	Health
Padmavati	R	Amarnath	2014-06-09	2019-06-09	Corporator	Congress	2	padmavati@bbmpcorp.com	Information Technology
Nethravathi	Pallavi	M	2014-05-02	2019-05-02	Corporator	BJP	3	nethravathi@bbmpcorp.com	Engineering
Munindra	Kumar	K A	2009-12-30	2019-05-02	Corporator	BJP	4	munindra@bbmpcorp.com	Lakes

- 5) View details of an elected representative by name
Input: Name of representative
Output: Details of the elected representative

VIEW DETAILS OF ELECTED REPRESENTATIVES BY NAME

First Name

Ramalinga

Middle Name

Raju

Last Name

Reddy

Submit

First Name	Middle Name	Last Name	Start Date	End Date	Designation	Political Party	Representative ID	Govt Email ID	Works in Dept
Ramalinga	Raju	Reddy	2013-06-11	2018-06-11	MLA	Congress	16	ramalinga@bloremla.com	Storm Water Drain

- 6) List all elected representatives by their political party
Input: Political party
Processing: Select all representatives affiliated to the given political party
Output: Display the list of representatives

VIEW PARTY-WISE ELECTED REPRESENTATIVES

Political Party

BJP ▼

Submit

First Name	Middle Name	Last Name	Start Date	End Date	Designation	Political Party	Representative ID	Govt Email ID	Works in Dept
Chandramma		Kempegowda	2014-05-02	2019-05-02	Corporator	BJP	1	chandramma@bbmpcorp.com	Health
Nethravathi	Pallavi	M	2014-05-02	2019-05-02	Corporator	BJP	3	nethravathi@bbmpcorp.com	Engineering
Munindra	Kumar	K A	2009-12-30	2019-05-02	Corporator	BJP	4	munindra@bbmpcorp.com	Lakes

7) List all corporators, MLAs or MPs and the wards under their jurisdiction

Input: Designation (Corporator, MLA, MP)

Processing: Fetch details of all representatives with the input designation

Output: Display all representatives with the given designation

First Name	Middle Name	Last Name	Start Date	End Date	Designation	Political Party	Representative ID	Govt Email ID	Works in Dept
Ramalinga	Raju	Reddy	2013-06-11	2018-06-11	MLA	Congress	16	ramalinga@bloremla.com	Storm Water Drain
Krishnappa		M	2013-06-11	2018-06-11	MLA	Congress	17	krishnappa@bloremla.com	Engineering

Designation

MLA ▼

Submit

8) Check the details of various social schemes in the municipality

Input: Select "View All Schemes"

Output: Display all the social schemes in the municipality

Social Schemes:

Display Social Schemes

Funds Allocated (in Lakhs)	No. of people benefited (in Lakhs)	Inception Date	Scheme Name	Representative in Charge	Initiated by Dept
350	350	2007-07-31	Anna Bhagyascheme	19	Health
75.34	9	2006-12-02	Bhagyalakshmi	24	Health
123	25	2010-01-15	Integrated Child Development Services	3	Information Technology
50	1	2016-05-29	PETC training scheme	17	Storm Water Drain
100.75	17	2004-06-19	Vajpayee Arogyashree	16	Health

9) View details of all government departments

Input: Select "View All Govt. Departments"

Output: Display all the Govt. Departments

VIEW THE NAME AND THE HOD OF THE DEPARTMENT

Government Departments:

Display Departments

HOD	Name	Email_ID
Deodhar	Census	census@bbmp.com
	Computer Science	cs.nitk.ac.in
T H Avin	Engineering	engg_dept@bbmpofc.com
Venkatachalapthy M	Health	health_dept@bbmpofc.com

10) View ward-wise details of public works

Input: Ward no.

Processing: Fetch details of all public works with the given ward no.

Output: Display all the ongoing public works in the ward

Ward No

5

Submit

Contractor	Description	Estimated Cost (in crores)	PWD No	Situated in Ward	Start Date	Status	Tentative Deadline
Pentapure RO System India Private Limited	Installation and commissioning of RO plant for dialysis centre at Yediyur	0.058	7	5	2013-12-28	Completed	2016-08-19

11) View ward-wise details of a government institution type

Input: Ward no., type

Processing: Fetch details of all the government institutions with the given ward no. and type

Output: Display all the requested government institutions in the ward

VIEW WARD-WISE GOVERNMENT INSTITUTIONS

Ward No

2

Type

School

Submit

Name	Ward_Number	Type	Address
Jawahar Navodaya Vidyalaya	2	School	Doddaballapur, Bashettihalli Post Bangalore, Karnataka 561203 , India

12) View all government institution

Input: Select "View All Govt. institution"

Output: Display all the Govt. institution

Government Institutions:

Display Institutions

Name	Ward_Number	Type	Address
Agastya International Foundation	4	School	79/26, 2nd Cross, Ramya Reddy Layout, Benson Town, Off Nandidurga Road Bangalore, Karnataka 560046 , India
Bangalore Baptist Hospital	12	Hospital	Bangalore Baptist Hospital, Bellary Road, Vinayakanagar, Bengaluru- 560024
Diacon Hospital (Diabetes Care Research Centre)	13	Hospital	#359-360, 19th Main, 1st block, Rajajinagar, Bengaluru-560010
Gandhi Centenary School	5	School	Dr. Rajkumar Road Rajaji Nagar 1st Block Bangalore, Karnataka 560010 , India
Govt. Arts College	7	College	Dr Ambedkar Road, Ambedkar Veedhi, Sampangi Rama Nagar, Bengaluru, Karnataka 560001
Govt. First Grade College	5	College	Next To NES Office, Diagonal Opposite to Yelahanka Police Station, Bengaluru, Karnataka 560064

13) View total funds allocated and total number of people benefited for each government department

Input: Select “View Department Wise Social Schemes Statistics”

Output: Display the department wise social schemes statistics

Department	Aggregate Funds Allocated	Total number of people benefited
Storm Water Drain	50	1
Information Technology	123	25
Health	526.0899963378906	376

View

14) View a list of social schemes and the elected representatives in charge of them

Input: Select “View Social Schemes Representative Head”

Output: Display the corresponding list

Social Schemes Representative Head

View

First Name	Middle Name	Last Name	Scheme Name
Nethravathi	Pallavi	M	Integrated Child Development Services
Ramalinga	Raju	Reddy	Vajpayee Arogyashree
Krishnappa		M	PETC training scheme
Devraj	R	V	Anna Bhagyascheme
Bhagwanth		Khuba	Bhagyalakshmi

15) View all grievances, wards against which the grievance is made and the person (government department HOD) responsible for it
Input: Select “View complaint information”
Output: Display the corresponding list

Complaint Information:

View

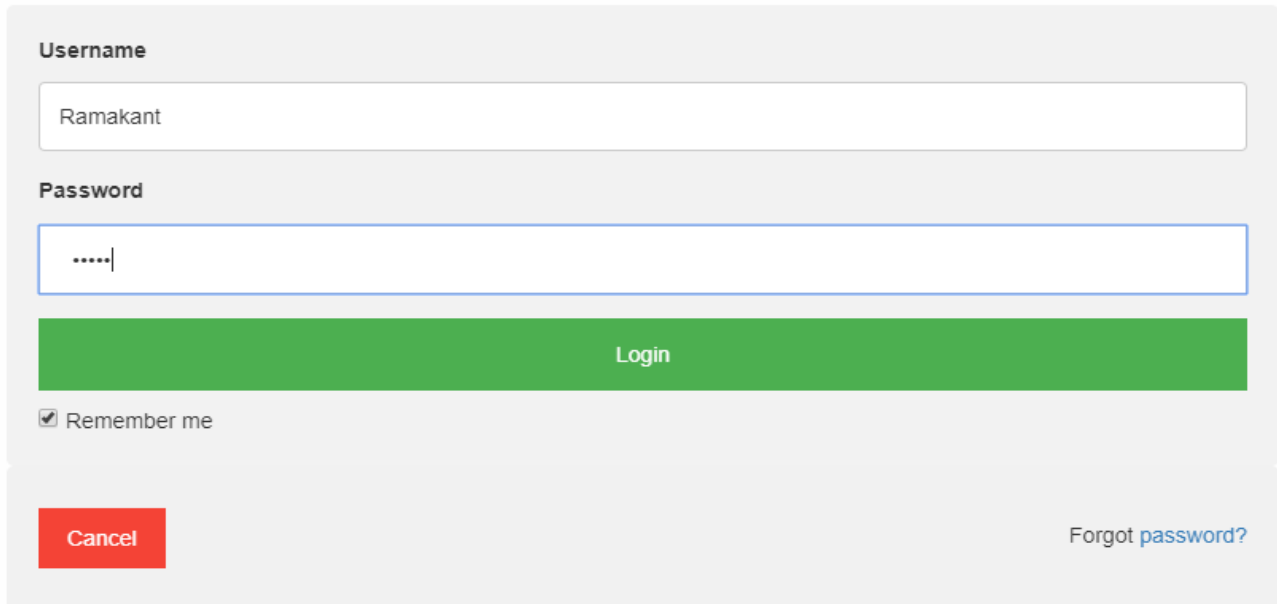
Complaint	Against Ward	Responsible Person
Illegal construction and road cutting on 4th cross, 2nd main, balaji layout, Vajarahalli, kanakapura road, Bangalore. Ward no.198 hemmigepura. No action taken by BBMP officials inspite of frequent complaints	Yelahanka Satellite	T H Avin
Dont know yet.	Jakkur	
No rocks to be found	Thanisandra	
22 people killed yesterday	Chowdeshwari	
22 people killed yesterday	Attur	T H Avin

Elected Representative

- 1) Login to the ER page

Input: Username, Password

Processing: Validation of username, password



The login form is displayed on a light gray background. It features two input fields: a 'Username' field containing the text 'Ramakant' and a 'Password' field with masked characters '.....'. Below the password field is a green 'Login' button. A checkbox labeled 'Remember me' is positioned below the login button. At the bottom left is a red 'Cancel' button, and at the bottom right is a link labeled 'Forgot password?'.

Username

Ramakant

Password

.....

Login

☒ Remember me

Cancel

Forgot [password?](#)

- 2) Add government institutions situated in his/her ward

Input: Ward no., institution name, type, address

Processing: Add details of the institution to the database

Add Government Institutions

Name

Agastya International Foundation

Ward Number

4

Type of Institution

School

Address

79/26, 2nd Cross, Ramya Reddy Layout, Benson Town, Off Nandidurga Road Bangalore, Karnataka 560046 , India |

Submit

Name	Ward Number	Type	Address
Agastya International Foundation	4	School	79/26, 2nd Cross, Ramya Reddy Layout, Benson Town...
Bangalore Baptist Hospital	12	Hospital	Bangalore Baptist Hospital, Bellary Road, Vinayaka...
Diacon Hospital (Diabetes Care Research Centre)	13	Hospital	#359-360, 19th Main, 1st block, Rajajinagar, Beng...
Gandhi Centenary School	5	School	Dr. Rajkumar Road Rajaji Nagar 1st Block Bangalor...
Govt. Arts College	7	College	Dr Ambedkar Road, Ambedkar Veedhi, Sampangi Rama ...

Processing: Add details of the public work to the database, set "Estimated Cost", "Status" and "Tentative deadline" to NULL

HOD of a department

- 1) Login to the HOD page

Input: Username, Password (Common to HODs of all government departments)

Processing: Validation of username, password

Username

Password

Login

☒ Remember me

Cancel [Forgot password?](#)

2) List all grievances against the department

Input: Select "View Pending Grievances"

Processing: Select all grievances not yet addressed

Output: Show all grievances chosen for redressal by the department

Complaint No	Complaint Description	Complainant	Status	Ward Number
1	Illegal construction and road cutting on 4th cross, 2nd main, balaji layout, Vajarahalli, kanakapura road, Bangalore. Ward no.198 hemmigeपुरa. No action taken by BBMP officials inspite of frequent complaints	Kiran Jathar	Not Redressed	4
2	22 people killed yesterday	Karthik M	Redressed	3

View all the grivevance against the department

Department

Department Password

Submit

3) Update the status of a grievance

Input: Complaint No, new status

Processing: Update status of the grievance in the database

Output: Error message, if the grievance status was not set as "Redressed"

Complaint_No	Complaint_Description	Complainant	Status	Ward_No	Looked_into_by_dept
1	It's been more than a week that there is non pick ...	Bapurao Karne	Not Redressed	3	Health
1	Illegal construction and road cutting on 4th cross...	Kiran Jathar	Not Redressed	4	Engineering
1	Dont know yet.	Aniket	Not Redressed	5	NULL

Update the status of a grievance

Ward Number

3

Complaint Number

1

Department Password

.....|

Submit

Complaint_No	Complaint_Description	Complainant	Status	Ward_No	Looked_into_by_dept
1	It's been more than a week that there is non pick ...	Bapurao Karne	Redressed	3	Health
1	Illegal construction and road cutting on 4th cross...	Kiran Jathar	Not Redressed	4	Engineering
1	Dont know yet.	Aniket	Not Redressed	5	NULL

4) Delete a grievance after it has been redressed

Input: Complaint No., "delete" option

Processing: Delete a complaint only if the status is set as "Redressed"

Delete a Redressed Grievance

Ward Number

Complaint Number

Department Password

Submit

Complaint_No	Complaint_Description	Complainant	Status	Ward_No	Looked_into_by_dept
1	Illegal construction and road cutting on 4th cross...	Kiran Jathar	Not Redressed	4	Engineering
1	Dont know yet.	Aniket	Not Redressed	5	NULL
1	No rocks to be found	The Rock	Not Redressed	6	NULL
2	22 people killed yesterday	Karthik M	Redressed	2	NULL

5) View all sub-departments under a department

Input: Department name

Output: View all sub-departments under the given department name

View all the grivevance against the department

Department

Department Password

Submit

Sub-Department	Government Department
	Engineering
Bhavan Rachna	Engineering
Building Development	Engineering

6) Add/Delete government sub departments

Input: Select “Add Sub-department” or “Delete Sub-department”, sub-department name

Processing: Update the database accordingly

Sub_dept_name	Govt_Dept_Name
	Engineering
Bhavan Rachna	Engineering
Building Development	Engineering
Contributory Health Scheme	Health
Food Licences Unit	Health
Stray Animals Control	Health

Add/Delete sub departments

Department

Lakes ▾

Sub Department

Sanitation

ADD/DELETE

Add ▾

Department Password

.....|

Submit

Sub_dept_name	Govt_Dept_Name
	Engineering
Bhavan Rachna	Engineering
Building Development	Engineering
Contributory Health Scheme	Health
Food Licences Unit	Health
Sanitation	Lakes
Stray Animals Control	Health

7) Add/Update contacts of the department

Input: Select "Add" or "Update contacts" respectively. Fill in a new govt. email ID and an office contact number.

Processing: Update contact details in the database

G C Rushabhendra Murthy	Information Technology	it_dept@bbmpofc.com
G R Harishilpa	Lakes	lakes_dept@bbmpofc.com
C L Shivakumar	Storm Water Drain	swd_dept@bbmpofc.com

Department

Storm Water Dræ ▾

HOD

C L Saikumar

Email

dept_swd@bbmpofc

Number

9449266547

ADD/UPDATE

Update ▾

Department Password

...

Submit

G C Rushabhendra Murthy Information Technology it_dept@bbmpofc.com

G R Harishilpa

Lakes

lakes_dept@bbmpofc.com

C L Saikumar

Storm Water Drain

dept_swd@bbmpofc.com

8) Add/Update details of social schemes for which the department is in charge

Input: Name of social scheme, funds allocated, inception date, elected representative in-charge

Processing: Add the new social scheme to the database, set “No. of people benefited” as 0

Funds_Allocated_(in_lakhs)	No_of_people_benefited_(in_lakhs)	Inception_date	Scheme_name	Representative_in_charge	Initiated_by_dept
350	350	2007-07-31	Anna Bhagyascheme	19	Health
75.34	9	2006-12-02	Bhagyalakshmi	24	Health

Add/Update details of social schemes

Department

Health ▼

Funds Allocated

76

No of People

9.5

Inception Date

12/02/2006

Scheme Name

Bhagyalakshmi

Representative In Charge

24

ADD/UPDATE

Update ▼

Department Password

Submit

Funds_Allocated_(in_lakhs)	No_of_people_benefited_(in_lakhs)	Inception_date	Scheme_name	Representative_in_charge	Initiated_by_dept
350	350	2007-07-31	Anna Bhagyascheme	19	Health
76	9.5	2006-12-02	Bhagyalakshmi	24	Health

Contractor of a public work

1) Login to the system

Input: Username, Password

Processing: Validation of username, password

Username

Avinash

Password

.....

Login

☒ Remember me

Cancel

Forgot password?

2) Update the status of the ongoing work

Input: PWD No., status

Processing: Update the database

PWD_No	Description	Start_Date	Tentative_Deadline	Contractor	Estimated_Cost_incrores	Status	Situated_in_Ward
1	Construction of 8 lane corridor with loops under p...	2016-09-25	2018-05-02	HP Asphalts	40	Completed	13
2	Construction of Running Room Building at South we...	2015-09-11	2017-10-26	GVKN Projects & Infrastructure Development Pvt Ltd	2.2	Ongoing	20
3	Construction of Elevated road from Minerva circle	2017-12-04	2018-01-19	HKV Projects India Pvt Ltd	134.89	Not started	6
...							

Update

PWD_No	Description	Start_Date	Tentative_Deadline	Contractor	Estimated_Cost_incrores	Status	Situated_in_Ward
1	Construction of 8 lane corridor with loops under p...	2016-09-25	2018-05-02	HP Asphalts	40	Completed	13
2	Construction of Running Room Building at South we...	2015-09-11	2017-10-26	GVKN Projects & Infrastructure Development Pvt Ltd	2.2	Ongoing	20
3	Construction of Elevated road from Minerva circle ...	2017-12-04	2018-01-19	HKV Projects India Pvt Ltd	134.89	Ongoing	6

Ongoing

Situated in ward

6

Submit

3) Set deadlines for the public work

Input: PWD No., deadline (date)

Processing: Update the database

6	Construction of Dengue laboratory in Hosahalli jun...	2017-07-23	2017-09-11	Bharat Quality Testing Lab	0.006	Not started	9
7	Installation and commissioning of RO plant for dia...	2013-12-28	2016-08-19	Pentapure RO System India Private Limited	0.058	Completed	5
8	Random checking of street lights	2017-10-29	0000-00-00	Balajee Vamanan	0	Ongoing	6

Update Deadline

PWD Number

8

Deadline

12/25/2022

Situated in ward

6

Submit

6	Construction of Dengue laboratory in Hosahalli jun...	2017-07-23	2017-09-11	Bharat Quality Testing Lab	0.006	Not started	9
7	Installation and commissioning of RO plant for dia...	2013-12-28	2016-08-19	Pentapure RO System India Private Limited	0.058	Completed	5
8	Random checking of street lights	2017-10-29	2022-12-25	Balajee Vamanan	0	Ongoing	6

4) Update estimated cost

Input: PWD No., estimated cost

Processing: Update the database

6	Construction of Dengue laboratory in Hosahalli jun...	2017-07-23	2017-09-11	Bharat Quality Testing Lab	0.006	Not started	9
7	Installation and commissioning of RO plant for dia...	2013-12-28	2016-08-19	Pentapure RO System India Private Limited	0.058	Completed	5
8	Random checking of street lights	2017-10-29	2022-12-25	Balajee Vamanan	0	Ongoing	6

Update Cost

PWD Number

8

Cost

25

Situated in ward

6

Submit

6	Construction of Dengue laboratory in Hosahalli jun...	2017-07-23	2017-09-11	Bharat Quality Testing Lab	0.006	Not started	9
7	Installation and commissioning of RO plant for dia...	2013-12-28	2016-08-19	Pentapure RO System India Private Limited	0.058	Completed	5
8	Random checking of street lights	2017-10-29	2022-12-25	Balajee Vamanan	25	Ongoing	6

Tools Used to implement the database

The web application is hosted on a webhost by the name 000webhost (<https://in.000webhost.com/>). The tools used are:

- HTML, CSS, JS for the front end
- PHP, MySQL for the back-end
- PhpMyAdmin is used to manage the database.

The webhost provides access to phpMyAdmin from within the website

Code Samples used in the project

HTML, CSS

```
<!DOCTYPE html>
<html>
<head>
<style>

input[type=password], select, textarea {
    width: 200px;
    padding: 12px;
    border: 1px solid #ccc;
    border-radius: 4px;
    box-sizing: border-box;
    margin-top: 6px;
    margin-bottom: 16px;
    resize: vertical;
}
input[type=text], select, textarea {
    width: 150px;
    padding: 12px;
    border: 1px solid #ccc;
    border-radius: 4px;
    box-sizing: border-box;
    margin-top: 6px;
    margin-bottom: 16px;
    resize: vertical;
}

input[type=submit] {
    background-color: #4CAF50;
    color: white;
    padding: 12px 20px;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}

input[type=submit]:hover {
    background-color: #45a049;
}

.container {
    border-radius: 5px;
    background-color: #f2f2f2;
    padding: 20px;
}
</style>
</head>
<body>
```

```
<div class="container">
  <form action="/Government Departments/HOD/addupdatecontact.php"
method="post">
    <label for="Ward No">Department</label><br>
    <select name="dept" id="Ward No" width="200px">
      <option>Engineering</option>
      <option>Health</option>
      <option>Information Technology</option>
      <option>Lakes</option>
      <option>Storm Water Drain</option>
    </select><br>
    <label for="HOD">HOD</label><br>
    <input type="text" id="HOD" name="HOD" width="100px" required>
    <br>
    <label for="email">Email</label><br>
    <input type="text" id="email" name="email" width="100px" required>
    <br>
    <label for="no">Number</label><br>
    <input type="text" id="no" name="number" width="100px" required>
    <br>
    <label for="Ward">ADD/UPDATE</label><br>
    <select name="adddelete" id="Ward" width="200px">
      <option>Add</option>
      <option>Update</option>
    </select>
    <br>
    <label for="subjec">Department Password</label><br>
    <input type="password" id="subjec" name="password" width="100px"
required>
    <br>
    <input type="submit" value="Submit" name="submit">
  </form>
</div>

</body>
</html>
```

Department

Engineering ▼

HOD

Email

Number

ADD/UPDATE

Add ▼

Department Password

Submit

PHP

```
<?php
$servername = "localhost";
$username = "id2963861_wp_2be0db2d9519ee3205bea03d32c84df8";
$password = "tarunkarthik";
$dbname = "id2963861_wp_2be0db2d9519ee3205bea03d32c84df8";

$conn = mysqli_connect($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
```

```

if($_POST)
{
    $dept = $_POST['dept'];
    $email = $_POST['email'];
    $number = $_POST['number'];
    $addupdate = $_POST['adddelete'];
    $password = $_POST['password'];
    $hod = $_POST['HOD'];

    $sql = "SELECT * FROM `department_login` WHERE password = '$password'";
    $result = mysqli_query($conn,$sql);
    $count = mysqli_num_rows($result);
    if($count!=1)
    {
        echo '<script type="text/javascript">alert("Wrong
Password");</script>';
    }
    else
    {
        if($addupdate=="Add")
        {
            $sql2 = "SELECT * FROM `Government_Department` WHERE
Name='$dept'";
            $result2 = mysqli_query($conn,$sql2);
            $count2 = mysqli_num_rows($result2);

            if($count2!=1)
            {
                $sql = "INSERT INTO `Government_Department`(`HOD`,`Name`,`
Govt_Dept_Name`) VALUES ('$hod','$dept','$email')";
                $result4 = mysqli_query($conn,$sql);
                echo '<script type="text/javascript">alert("record
added");</script>';
            }
            else
            {
                echo '<script type="text/javascript">alert("record already
exists");</script>';
            }
        }

        $sql3 = "SELECT * FROM `Govt_Dept_Office_Nos` WHERE
Govt_Dept_Name='$dept'";
        $result3 = mysqli_query($conn,$sql3);
        $count3 = mysqli_num_rows($result3);
        if($count3!=1)
        {
            $sql = "INSERT INTO
`Govt_Dept_Office_Nos`(`Office_No`,`Govt_Dept_Name`) VALUES
('$number','$dept')";
            $result4 = mysqli_query($conn,$sql);
            echo '<script type="text/javascript">alert("record
added");</script>';
        }
        else
        {

```

```

        echo '<script type="text/javascript">alert("record already
exists");</script>';
    }
}
else
{
    $sql2 = "SELECT * FROM `Government_Department` WHERE
Name='$dept'";
    $result2 = mysqli_query($conn,$sql2);
    $count2 = mysqli_num_rows($result2);

    if($count2==1)
    {
        $sql = "UPDATE `Government_Department` SET
`HOD`='$hod', `Email_ID`='$email' WHERE `Name`='$dept'";
        $result4 = mysqli_query($conn,$sql);
        echo '<script type="text/javascript">alert("record
added");</script>';
    }
    else
    {
        echo '<script type="text/javascript">alert("record already
exists");</script>';
    }
}

    $sql3 = "SELECT * FROM `Govt_Dept_Office_Nos` WHERE
Govt_Dept_Name='$dept'";
    $result3 = mysqli_query($conn,$sql3);
    $count3 = mysqli_num_rows($result3);
    if($count3==1)
    {
        $sql = "UPDATE `Govt_Dept_Office_Nos` SET
`Office_No`='$number' WHERE Govt_Dept_Name='$dept'";
        $result4 = mysqli_query($conn,$sql);
        echo '<script type="text/javascript">alert("record
updated");</script>';
    }
    else
    {
        echo '<script type="text/javascript">alert("record does not
exists");</script>';
    }
}
}
}
?>

```


GitHub link to the PHP codes

<https://github.com/Tarun-Karthik/Municipal-E-Governance-Website>

Conclusion and Future Work

The tools that we used are the website 000webhost that helped us get a domain and a server and allowed us to host the website. All the functionalities have been met according to the project report. The new languages that we had to learn are

- PHP
- HTML
- CSS
- JavaScript.

One way to possibly expand the website is to a point such that it can be actually used by the public/government to provide a better, faster and convenient governance for the public.