VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI-590018, KARNATAKA

PROJECT REPORT ON

"ELECTRICITY BILL MANAGEMENT SYSTEM"

Submitted by

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November 2023 – February 2024

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Certificate

This is to certify that the Mini Project Report entitled, **““ELECTRICITY BILL MANAGEMENT SYSTEM”**,prepared by **VIVEK H P, SHASHANK A REDDY, YASHAS R,** bearing USN **1CR21EC242 , 1CR21EC194 , 1CR21EC246** , a bonafide student of CMR Institute of Technology in partial fulfillment of the requirements for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of the Visvesvaraya Technological University, Belagavi -590018 during the academic year 2023-2024.

It is certified that all the corrections and suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements prescribed for the said degree.

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Signature of Guide **Signature of HOD**

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of ISE, CMRIT **Professor & HoD**
Dept. of ECE, CMRIT

ABSTRACT

An electricity bill management system is a software program used to manage and track the generation, distribution, and consumption of electricity, as well as the billing of customers for their usage. The system typically includes a database management system (DBMS) to store information about customers, their usage, and billing history, as well as a user interface for managing and monitoring the electricity distribution network. Some features that an electricity bill management system may include are: Customer registration, login and management Meter reading and recording Usage tracking and billing Bill payment management Reports and analytics
Complaints and queries management

The main function of the system is to keep track of the consumption of electricity by customers, generate bills, and manage payments. The DBMS is used to store and retrieve data related to customers, their usage, and billing history, as well as to perform various operations on that data, such as searching for specific customers, generating reports on usage trends, etc. This system can be used by utility companies, or by the retail electricity providers to manage the billing and consumption records of the customers

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany a successful completion of any task would be incomplete without the mention of people who made it possible, success is the epitome of hard work and perseverance, but steadfast of all is encouraging guidance.

So with gratitude I acknowledge all those whose guidance and encouragement served as beacon of light and crowned our effort with success.

I would like to thank **Dr. R Elumalai**, **Professor and Head**, Department of Electronics & Communication Engineering who shared her opinion and experience through which I received the required information crucial for the project.

I consider it a privilege and honour to express my sincere gratitude to my guide **Prof. P Chattopadhyay, Assistant Professor**, Department of Information Science & Engineering, for her valuable guidance throughout the tenure of this project.

Finally I would like to thank all my family members and friends whose encouragement and support was invaluable.

Group Members:	**VIVEK H P**	**(1CR21EC242)**
	SHASHANK A REDDY	**(1CR21EC194)**
	YASHAS R	**(1CR21EC246)**

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CHAPTER 1 INTRODUCTION

1.1INTRODUCTION TO SQL

Structure Query Language (SQL) is a programming language used for storing and managing data in Relational Database Management System (RDBMS). SQL was the first commercial language introduced for E.FCodd's Relational model. Today almost all RDBMS (MySQL, Oracle, Infomix, Sybase, MS Access) uses SQL as the standard database language. SQL is used to perform all type of data operations in RDBMS. Most of the actions you need to perform on a database are done with SQL statements. SQL defines following data languages to manipulate data of RDBMS:

1.DDL: Data Definition Language All DDL commands are auto-committed. That means it saves all the changes permanently in the database. Eg: create - To create new table or database, alter - For alteration, truncate - Delete data from table, drop - To drop a table

2.DML: Data Manipulation Language DML commands are not auto-committed. It means changes are not permanent to database, they can be rolled back. Eg: insert - To insert a new row, update - To update existing row, delete - To delete a row, merge - merging two rows or two tables

3.TCL: Transaction Control Language These commands are to keep a check on othercommands and their affect on the database. Thesecommands can annul changes made by other commands. commands by rolling back to original state. It can also make changes permanent. Eg: commit - to permanently save, rollback - to undo change, save point - to save temporarily.

4.DCL: Data Control Language Data control language provides command to grant and take back authority. Eg: grant - grant permission of right, revoke - take back permission.

5.DQL: Data Query Language DQL is used to operate on queries. Eg: Select retrieve records from one or more table

1.2 INTRODUCTION TO PROPOSED SYSTEM

Our project entitled “Electricity Bill Management System” aims is to generate

electricity bill with all the charges and penalty. Manual system that is employed is extremely laborious and quite inadequate. It only makes the process more difficult and hard.

The aim of our project is to develop a system that is meant to partially computerize the work performed in the electricity Board like generating monthly electricity bill, record of consuming unit of energy, store record of the customer and previous unpaid record.

1.3 PROJECT REPORT OUTLINE

CHAPTER1: INTRODUCTION

The brief introduction about the backend software SQL, front end software HTML and the project report outline details are specified

CHAPTER 2: REQUIREMENT SPECIFICATION

The basic software requirements and hardware requirements to do this project are mentioned.

CHAPTER 3:SCOPE AND OBJECTIVE OF PROJECT

The basic software requirements and hardware requirements to do this project are mentioned.

CHAPTER 4: IMPLEMENTATION

The implementation parts for developing the project are explained step wise briefly.

CHAPTER 5: FRONT END DESIGN

The front end design is explained by briefly describing about the system design and connectivity to the database. The front end codes used for main page, insertion, search, deletion are displayed.

CHAPTER 6: SNAPSHOTS

The results with the snapshots for the various operations are displayed with the snapshots..

CHAPTER 2
SYSTEM REQUIREMENTS

The system requirements for a project outline the necessary hardware and software resources for development, deployment, and operation. It is important to carefully consider and plan for the system requirements of a project, as the wrong choices can lead to performance issues, compatibility problems, or other issues that can impact the success of the project.

2.1 SOFTWARE REQUIREMENTS

Operating System : 64bit operating system, x64-based processor

Database : MYSQL

Tools : PHP, Xampp Server 3.2.2

2.2 HARDWARE REQUIREMENTS

Processor : Intel® Celeron® CPU N3060 @1.60GHz

RAM : 4.00 GB

Hard Disk : 1 TB

Compact Disk : CD-ROM, CD-R, CD-RW

Input device : Keyboard, mouse

Output device : Monitor screen

CHAPTER 3 SCOPE AND OBJECTIVES

3.1 SCOPE:

Our project aims at Business process automation, ie, we have tried to computerize various processes of Electricity Billing System. In the sector of electricity board we have computerizes their department and stock maintenance.

Scope of any software depends upon the following things:

1. It satisfy the user requirement
2. Be easy to understand by the user and operator
3. Be easy to operate
4. Have a good user interface
5. Be expandable
6. Delivered on schedule within the budget

We have tried to make such type of software, which satisfy the above given requirement.

3.2 OBJECTIVES:

The firm handles all of the work manually, which is very tedious and mismanaged

The objective of our project is as follows: a.

To keep the information of Customer

b. To keep the information of consuming unit of energy of current month.
c. To keep the information of consuming unit of energy of previous month.
d. To keep the information of employee working in the department. e. To maintain the record of the department.

CHAPTER 4

IMPLEMENTATION

4.1 ER DIAGRAM

An entity-relationship model (ER model) describes inter-related things of Interest in a specific domain of knowledge. An ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between instances of those entity types. ER model is commonly formed to represent things that a business needs to remember in order to perform business processes. Consequently, the ER model becomes an abstract data model that defines a data or information structure that can be implemented in a database, typically a relational database. The main components of ER model are: entity set and relationship set. Here are the geometricshapes and their meaning in an ER Diagram.

Rectangle : Represents Entity sets.

Ellipses : Attributes.

Diamonds: Relationship set.

Lines : They link attributes to Entity Sets and this to Relationship Set.

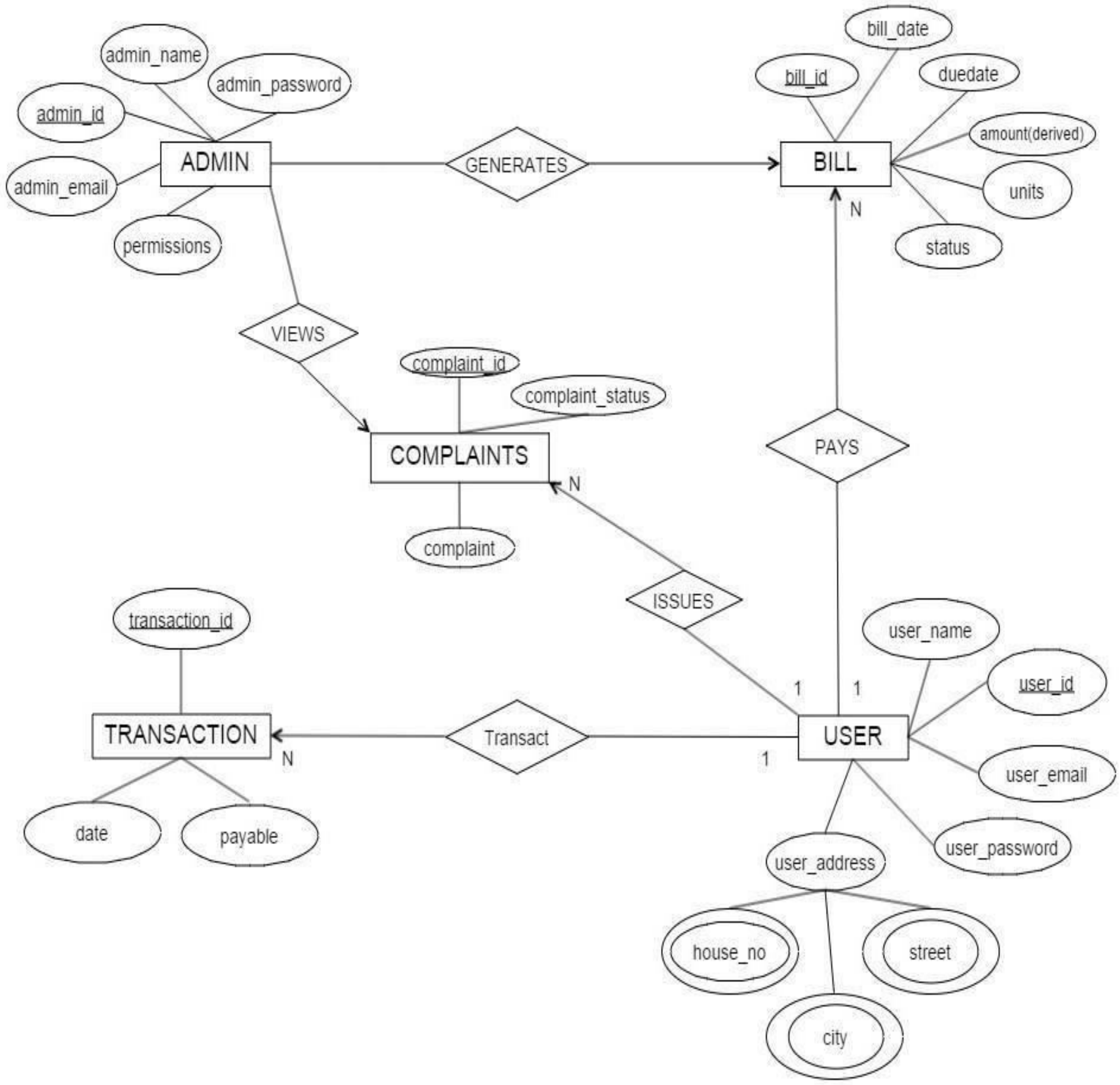
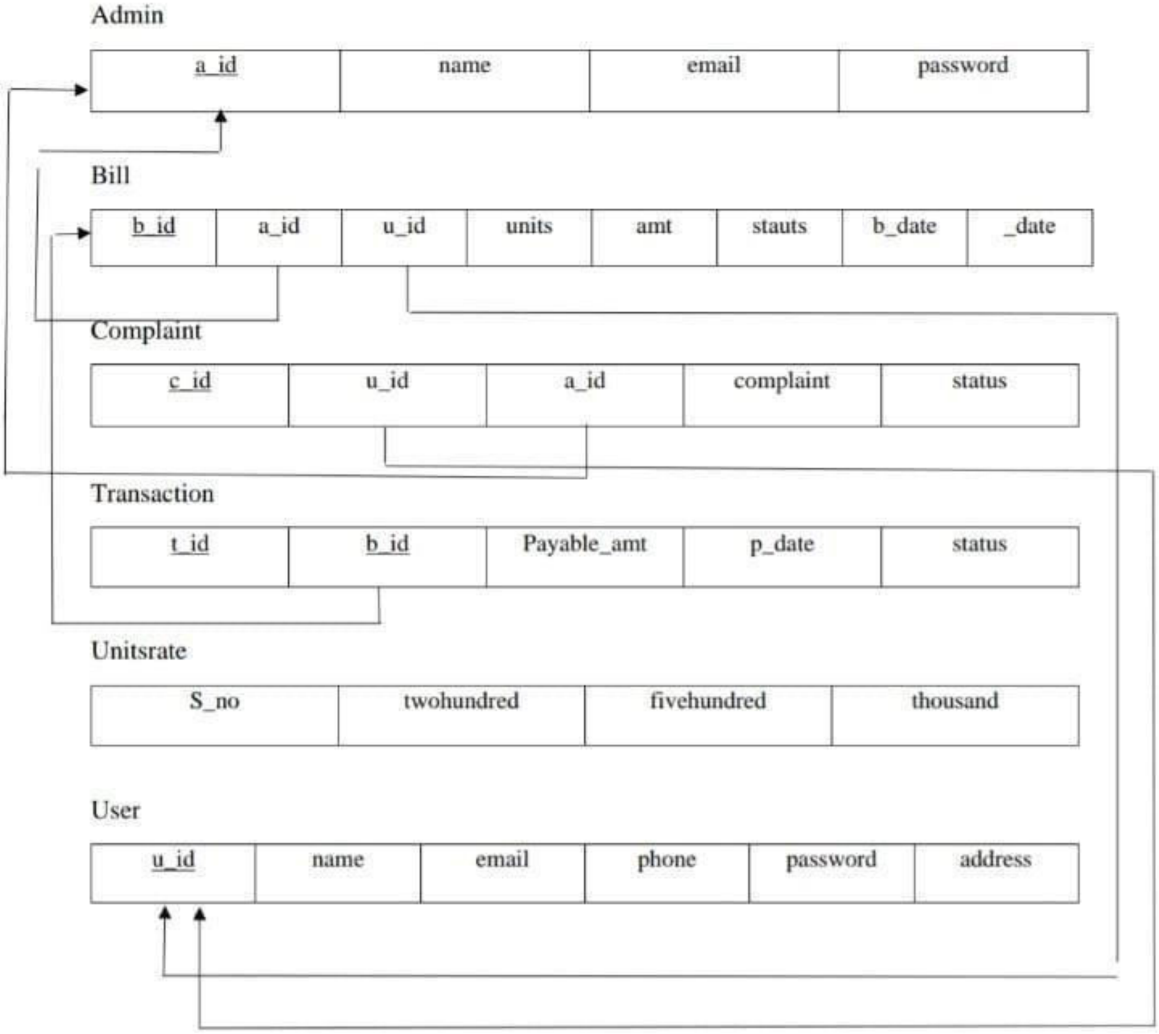


Fig.no 4.1: ER Diagram Of Electricity Bill Management System

4.2 MAPPING OF ER DIAGRAM TO SCHEMA DIAGRAM



Admin

a_id	name	email	password

Bill

b_id	a_id	u_id	units	amt	stauts	b_date	_date

Complaint

c_id	u_id	a_id	complaint	status

Transaction

t_id	b_id	Payable_amt	p_date	status

Unitsrate

S_no	twohundred	fivehundred	thousand

User

u_id	name	email	phone	password	address

Fig. no 4.2 Schema diagram of Electricity Bill management system.

4.3 NORMALIZE THE RELATIONS

Normalization is a process of organizing the data in database to avoid data redundancy, insertion anomaly, update anomaly & deletion anomaly. There are three main types of normal forms:

a) First normal form(1NF)

b) Second normal form(2NF)

c) Third normal form(3NF)

1. First normal form (1NF)

a) As per the rule of first normal form, an attribute (column) of a table cannot hold multiple values.

b) It should hold only atomic values.

2.Second normal form (2NF)

A table is said to be in 2NF if both the following conditions hold

: a) Table is in 1NF

b) No non-prime attribute is dependent on the proper subset of any candidate key of table.

c) An attribute that is not part of any candidate key is known as nonprime attribute

3. Third Normal form (3NF)

A table design is said to be in 3NF if both the following conditions hold

a) Table must be in 2NF.

b) An attribute that is not part of any candidate key is known as non-prime attribute. In other words 3NF can be explained like this: A table is in 3NF if it is in 2NF and for each functional dependency X-> Y at least one .

Dept. of

CHAPTER 5 FRONT END DESIGN

5.1 CONNECTIVITY TO DATABASE

Systems design is the process of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. Systems design could see it as the application of systems theory to product development. There is some overlap with the disciplines of systems analysis, systems architecture and systems engineering. If the broader topic of product development "blends the perspective of marketing, design, and manufacturing into a single approach to product development," then design is the act of taking the marketing information and creating the design of the product to be manufactured. Systems design is therefore the process of defining and developing systems to satisfy specified requirements of the user. Until the 1990s systems design had a crucial and respected role in the data processing industry. In the 1990s standardization of hardware and software resulted in the ability to build modular systems. The increasing importance of software running on generic platforms has enhanced the discipline of software engineering.

Electricity Bill Management System

5.2 INDEX CODE:

```
<?php require_once("Includes/config.php");
require_once("Includes/session.php");


if(isset($_SESSION['logged']))
{ if ($_SESSION['logged'] == true)
   { if ($_SESSION['account']=="admin") {
      header("Location:admin/index.php");
         }
      elseif ($_SESSION['account']=="user") {
         header("Location:user/index.php");
         } } else {
   header("Location:../index.php");
```

```
    }
}


if(isset($_POST['login_submit'])) { if(!(isset($_POST['email'])))
   {
      if(!(isset($_POST['pass']))) {
         location('index.php');
      }
   }
}
?>

<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="utf-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta     name="description"     content="">
        <meta name="author" content="">
   <link                                                    href="data:image/x-
icon;base64,AAABAAEAEBAAAAEAIABoBAAAFgAAACgAAAAQAAAAIAEAIA
AAAQAoJiIKKCYiWgAoJiIgKCYiuygmIhgAAAAAAAAAAAAAAoJiJDKCYi7SgmIl
IoJiJzKCYi/SgmIqAAAAAAAAAACgmIgooJiKmKCYi/ygmIuAoJiIOAAACgmIh8oJi
LPKCYi/ygmIv4oJiI/AAAAAAAAACgmIkEoJiLrKCYi/ygmIv8oJiKMAACgmInAoJiL
8KCYi/ygmIv8oJiL/KCYiySgmIpwoJiJzKCYiKQAAAACgmIhYoJiJyKCYinCgmIsIoJi
L8KCYi/ygmIv8oJiL/KCYinygmIgkAAoJiJTKCYi/ygmIv8oJiL5KCYiaAAAAoJiIeKC
Yi7ygmIv8oJiLjKCYiNwAAAAAoJiIDKCYixCgmIv8oJiK+KCYiFQAAAAAKCYigig
mIv8oJiKJKCYiAwAKCYiPigmIvAoJiJSAKCYiEigmIrooJiInAAAAAAAAACgmIlooJ
iIMAAAA//8AAP/3AAD/7wAA/88AAP8fAAD+PwAA/D8AAPgfAAD4DwAA/j8AAP
```

```
x/AAD4/wAA8f8AAPf/AADv/wAA//8AAA==" rel="icon" type="image/x-icon" />


  <title>E-bill System</title>

  <link href="assets/css/bootstrap.css" rel="stylesheet">

  <link href="assets/css/font-awesome.css" rel="stylesheet">



  <link href="assets/css/main.css" rel="stylesheet">
```

```
</head>

<body>

    <div class="navbar navbar-default navbar-fixed-top">
        <div class="container">
            <div class="navbar-header">
                <a class="navbar-brand" href="index.php"><b>E-Billing System</b></a>
            </div>
            <div class="navbar-collapse collapse" >
                <?php include("login.php"); ?>
            </div>

        </div>
    </div>



    <div id="headerwrap">
        <div class="darkhearderwrap">
            <div class="container">
                <div class="row">
                    <div class="col-lg-6 signup">
                        <h1>Electricity Billing System</h1>
                        <p>This websiteat the end of its construction willact as aconsumer oriented service for users for easy payment of their respective <b>Electricity Bill</b> as well as interact with their providers in case of any queries or grivances.</p>
                    </div>

                    <div class="col-lg-6">
                        <h1>Sign Up</h1>
                        <?php include("signup.php"); ?>
                    </div>
                </div>

            </div>

            </div>
    </div>


    <div class="container">
        <div class="row mt centered">
            <div class="col-lg-6 col-lg-offset-3">
                <h1>How this Portal woks</h1>
                <h3></h3>
            </div>
        </div>


        <div class="row mt centered">

            <div class="col-lg-4">
                <img src="assets/img/ser01.png" width="180" alt="">
                <h4>1 - Login</h4>
                <p></p>
            </div>

            <div class="col-lg-4">
                <img src="assets/img/ser02.png" width="180" alt="">


                <h4>2 - Peruse Bills</h4>
                <p></p>
            </div>
```

```
         <div class="col-lg-4">
             <img src="assets/img/ser03.png" width="180" alt="">
             <h4>3 - Transact</h4>
             <p></p>
         </div>

     </div>

 </div>

 <?php require_once("footer.php");
 ?>

 <script src="assets/js/jquery-1.11.0.js"></script>

 <script src="assets/js/bootstrap.min.js"></script>

 <script src="assets/js/custom.js"></script>
 <script>


         function    validateForm()    {    var    x    =
         document.forms["myForm"]["email"].value;



         var atpos = x.indexOf("@");

         var dotpos = x.lastIndexOf(".");

         if (atpos< 1 || dotpos<atpos+2 || dotpos+2>=x.length)
             { alert("Not a valid e-mail address"); return false;
         }
     } </script>
```

```
</body>

</html>
```

5.3 CODE FOR LOGIN PAGE:

```
<?php require_once("Includes/config.php");
  require_once("Includes/session.php");
  ?>
<form action="index.php" class="navbar-form navbar-right" role="form" method="post">
    <div class="form-group">
        <input type="text" placeholder="Email" name="email" id="email"
class="formcontrol">
    </div>
    <div class="form-group">
        <input type="password" placeholder="Password" name="pass" id="pass"
class="form-control">
    </div>
     <button type="login_submit" class="btn btn-success" onclick=" validateForm();">Sign
In</button>
</form>
```

5.4 CODE FOR SIGN UP PAGE:

```
<?php require_once("Includes/session.php");
$nameErr = $phoneErr = $addrErr = $emailErr = $passwordErr = $confpasswordErr = "";
$name = $email = $password = $confpassword = $address = "";
$flag=0;

function test_input($data) {
        $data = trim($data);
        $data = stripslashes($data);
        $data = htmlspecialchars($data);
        return $data;
    }


if(isset($_POST["reg_submit"])) {
        $email = test_input($_POST['email']);

        $password = test_input($_POST["inputPassword"]);
        $confpassword = test_input($_POST["confirmPassword"]);
        $address = test_input($_POST["address"]);
        $email = test_input($_POST['email']);


        if (empty($_POST["name"])) {
            $nameErr = "Name is required";
            $flag=1;    echo
            $nameErr;
        } else {
            $name = test_input($_POST["name"]);


            if (!preg_match("/^[a-zA-Z ]*$/",$name)) {
                $nameErr = "Only letters and white space allowed";
                $flag=1;
                echo $nameErr;
            }
        }

        if (empty($_POST["email"])) {
            $emailErr = "Email is required";
            $flag=1;
            } else {
```

```
    $email = test_input($_POST["email"]);


     if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
        $emailErr = "Invalid email format";
        $flag=1;     echo
        $emailErr;
    }
}

if (empty($_POST["inputPassword"]))
{
    $passwordErr = "PASSWORD missing";
    $flag=1
; } else
{
    $password = $_POST["inputPassword"];
}


if (empty($_POST["confirmPassword"]))
{
    $confpasswordErr = "missing";
    $flag=1
; } else
{ if($_POST['confirmPassword'] == $password)
    {
        $confpassword = $_POST["confirmPassword"];
    }
    else
    {
        $confpasswordErr = "Not same as password!";
        $flag = 1;
    }
}


if (empty($_POST["address"])) {
    $addrErr = "Address is required";
    $flag=1;   echo
    $addrErr;
} else {
    $address = test_input($_POST["address"]);

}


if (empty($_POST["contactNo"])) {
    $flag=1;
    $contactNo = "";

} else {
    $contactNo = test_input($_POST["contactNo"]);
    if(!preg_match("/^d{10}$/", $_POST["contactNo"])){
        $phoneErr="10 digit phone no allowed.";


        echo $_POST['contactNo'];
    }
}

echo $flag;
if($flag == 0)
{
    require_once("Includes/config.php");
    $sql = "INSERT INTO user (`name`,`email`,`phone`,`pass`,`address`)
```

```
                  VALUES('$name','$email','$contactNo','$password','$address')";
                  echo $sql;
            if (!mysqli_query($con,$sql))
            { die('Error: ' . mysqli_error($con));
            }
            header("Location:index.php");
        }
    }
?>


<?php


?>
<form          action="signup.php"   method="post"          class="form-horizontal"
          role="form" onsubmit="return validateForm()">


<center>
    <div class="row form-group">
        <div class="col-md-12">
            <input          type="name"   class="form-control"    name="name"     id="name"
placeholder="Full Name" required>
            <!--  <label><?php  echo  $nameErr;?></label>  -->
        </div>
    </div>
    <div class="form-group">
        <div class="col-md-12">
            <input      type="email"     class="form-control"     name="email"     id="email"
placeholder="Email" required>
            <!--   <label><?php   echo   $emailErr;?></label>   -->
        </div>
```

```
  </div>
  <div class="form-group">
    <div class="col-md-12">
      <input type="password" class="form-control" name="inputPassword"
id="inputPassword" placeholder="Password" required>
      <!-- <label><?php echo $passwordErr;?></label> -->
    </div>
  </div>
  <div class="form-group">
    <div class="col-md-12">
      <input type="password" class="form-control"
     name="confirmPassword" placeholder="Confirm Password" required>
      <!-- <label><?php echo $confpasswordErr;?></label><label><?php echo
$confpasswordErr;?></label> -->
    </div>
  </div>
  <div class="form-group">


    <div class="col-md-12">
      <input type="tel" class="form-control" name="contactNo" placeholder="Contact
No." required>
      <!-- <label><?php echo $phoneErr;?></label> -->
    </div>
  </div>
  <div class="form-group">
    <div class="col-md-12">
      <input type="address" class="form-control" name="address"
placeholder="Address" required>
      <!-- <label><?php echo $addrErr;?></label> -->
    </div>
    </div>
    <div class="form-group">
        <div class="col-md-10">
            <button name="reg_submit" class="btn btn-primary">Sign Up</button>
        </div>
    </div>
    </center>
</form>
```

5.5 CODE FOR TABLE CREATION AND INSERTION:

```
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
SET time_zone = "+00:00";

DELIMITER $$
CREATE DEFINER=`root`@`localhost` PROCEDURE `unitstoamount` (IN `units`
INT(14), OUT `result` INT(14)) BEGIN

    DECLARE a INT(14) DEFAULT 0;
    DECLARE b INT(14) DEFAULT 0;
    DECLARE c INT(14) DEFAULT 0;
    SELECT twohundred FROM unitsRate INTO a ; SELECT
    fivehundred FROM unitsRate INTO b ;
    SELECT thousand FROM unitsRate INTO c ;

    IF      units<200
    then
```

```
        SELECT a*units INTO result;

    ELSEIF       units<500
    then
        SELECT (a*200)+(b*(units-200)) INTO result;
    ELSEIF   units   >   500

          then

        SELECT (a*200)+(b*(300))+(c*(units-500)) INTO result;
    END IF;


END$$

CREATE DEFINER=`root`@`localhost` FUNCTION `curdate1` () RETURNS INT(11)
BEGIN

    DECLARE x INT;
    SET x = DAYOFMONTH(CURDATE());
    IF (x=1)
    THEN
        RETURN 1;
    ELSE
        RETURN 0;
    END IF;


END$$

DELIMITER ;

CREATE TABLE `admin` (

`id` int(14) NOT NULL,

  `name` varchar(40) NOT NULL, `email`
  varchar(40) NOT NULL,
  `pass` varchar(20) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `admin` (`id`, `name`, `email`, `pass`) VALUES
(1, 'Likith', ‘likith@gmail.com', 'Password@123'),
(2, 'Sudev', 'Sudev@gmail.com', 'admin2');



CREATE TABLE `bill` (
  `id` int(14) NOT NULL,
  `aid` int(14) NOT NULL,
  `uid` int(14) NOT NULL,
  `units` int(10) NOT NULL,
  `amount` decimal(10,2) NOT NULL,
  `status` varchar(10) NOT NULL,
  `bdate` date NOT NULL,
`ddate` date NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;



INSERT INTO `bill` (`id`, `aid`, `uid`, `units`, `amount`, `status`, `bdate`, `ddate`)
VALUES
(17, 1, 8, 210, '450.00', 'PROCESSED', '2021-07-06', '2021-08-05'),
(18, 1, 1, 61, '122.00', 'PROCESSED', '2021-07-10', '2021-08-09'),
(19, 1, 2, 78, '156.00', 'PENDING', '2021-07-10', '2021-08-09'), (20,
1, 3, 70, '140.00', 'PROCESSED', '2021-07-10', '2021-08-09'), (21,
1, 4, 98, '196.00', 'PENDING', '2021-07-10', '2021-08-09'), (22, 1, 9,
55, '110.00', 'PROCESSED', '2021-07-10', '2021-08-09'), (23, 1, 11,
89, '178.00', 'PROCESSED', '2021-07-10', '2021-08-09'), (24, 1, 7,
103, '206.00', 'PENDING', '2021-07-10', '2021-08-09');

CREATE TABLE `complaint` (
  `id` int(14) NOT NULL,
  `uid` int(14) NOT NULL,
  `aid` int(14) NOT NULL,
  `complaint` varchar(140) NOT NULL,
  `status` varchar(40) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `complaint` (`id`, `uid`, `aid`, `complaint`, `status`) VALUES
(1, 1, 1, 'Transaction Not Processed', 'PROCESSED'),
(2, 1, 1, 'Transaction Not Processed', 'PROCESSED'),
(3, 2, 1, 'Previous Complaint Not Processed', 'PROCESSED'),
(4, 2, 1, 'Transaction Not Processed', 'PROCESSED'), (5,
2, 2, 'Transaction Not Processed', 'PROCESSED'),
(6, 1, 1, 'Bill Not Correct', 'PROCESSED'),
(7, 3, 1, 'Bill Not Correct', 'PROCESSED'),
(8, 3, 2, 'Transaction Not Processed', 'PROCESSED'),


(9, 4, 2, 'Transaction Not Processed', 'PROCESSED'),
(10, 4, 1, 'Bill Not Correct', 'PROCESSED'),
(11, 5, 2, 'Bill Generated Late', 'PROCESSED'),
(12, 1, 2, 'Bill Generated Late', 'NOT PROCESSED'),
(13, 11, 1, 'Bill Generated Late', 'PROCESSED');

CREATE TABLE `transaction` (
  `id` int(14) NOT NULL,
  `bid` int(14) NOT NULL,
  `payable` decimal(10,2) NOT NULL,
  `pdate` date DEFAULT NULL,
  `status` varchar(10) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
INSERT INTO `transaction` (`id`, `bid`, `payable`, `pdate`, `status`) VALUES
(17, 17, '450.00', '2021-07-06', 'PROCESSED'),
(18, 18, '122.00', '2021-07-10', 'PROCESSED'),
(19, 19, '156.00', NULL, 'PENDING'),
(20, 20, '140.00', '2021-07-10', 'PROCESSED'),
(21, 21, '196.00', NULL, 'PENDING'),
(22, 22, '110.00', '2021-07-10', 'PROCESSED'),
(23, 23, '178.00', '2021-07-10', 'PROCESSED'),
(24, 24, '206.00', NULL, 'PENDING');


CREATE TABLE `unitsrate` ( `sno`
  int(1) DEFAULT NULL, `twohundred`
  int(14) NOT NULL,
  `fivehundred` int(14) NOT NULL,


  `thousand` int(14) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


INSERT INTO `unitsrate` (`sno`, `twohundred`, `fivehundred`, `thousand`) VALUES
(1, 2, 5, 10);


CREATE TABLE `user` (
  `id` int(14) NOT NULL,
  `name` varchar(40) NOT NULL,
  `email` varchar(40) NOT NULL,
  `phone` varchar(255) NOT NULL,
  `pass` varchar(20) NOT NULL,
  `address` varchar(100) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

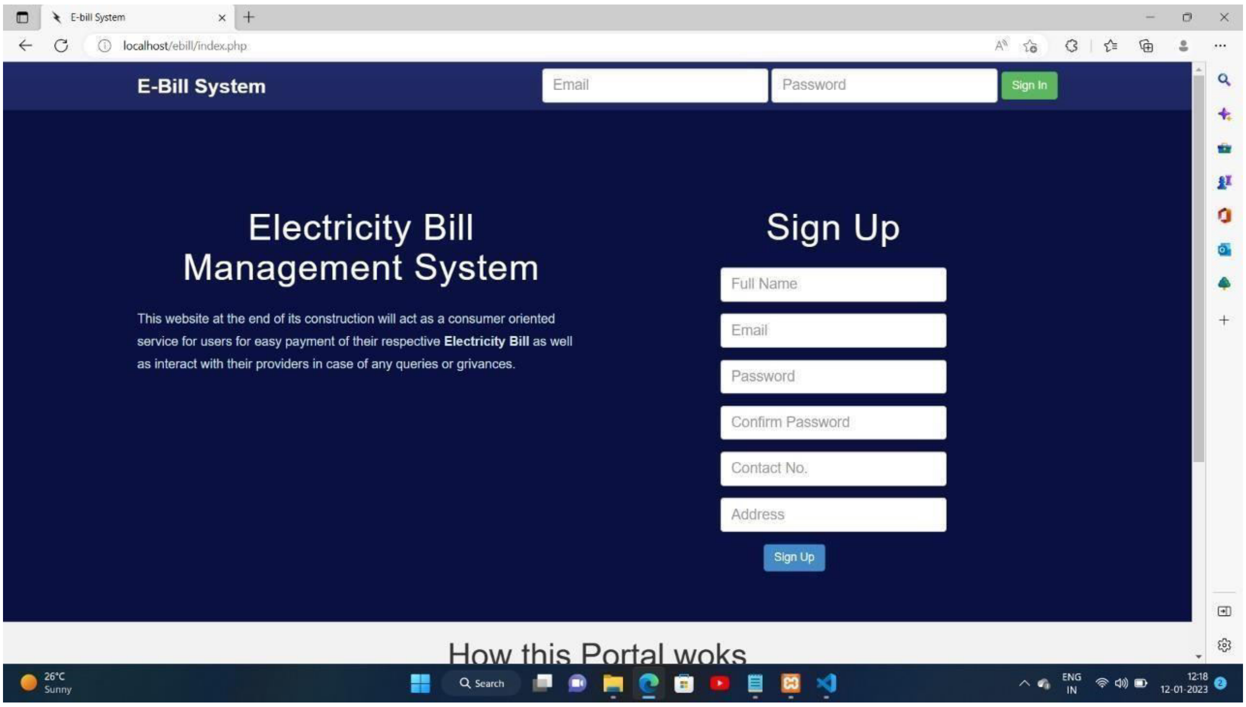
```
INSERT INTO `user` (`id`, `name`, `email`, `phone`, `pass`, `address`) VALUES
(1, 'Ramesh\n', 'ram@gmail.com', '7450002145', 'password', 'Blr'),
(2, 'suresh', 'sur@gmail.com', '7854547855', 'password', 'Klr'),
(3, 'Ganesh', 'gana@gmail.com', '7012569980', 'password', 'Malur'),
(4, 'Manish', 'man@gmail.com', '7012458888', 'password', 'Belur'),
(5, 'Sathish', 'sat@gmail.com', '7012565800', 'password', 'Hope farm'),
(6, 'Tejas', 'tej@gmail.com', '7896541000', 'password', 'whitefield'),
(7, 'Gagana', 'gaga@gmail.com', '70145850025', 'password', 'Rainbow'),
(8, 'Srineth', 'sri@gmail.com', '7012545555', 'password', 'Mahadavepur'),
(9, 'Williams', 'williams@gmail.com', '7696969855', 'password', 'Marathalli'),
(10, 'Moore', 'moore@gmail.com', '7896500010', 'password', 'Kundalahalli'),
(11, 'Tommy', 'tommy@gmail.com', '7412580020', 'password', 'Brookefield');


ALTER TABLE `admin`
  ADD PRIMARY KEY (`id`);

ALTER TABLE `bill`
  ADD PRIMARY KEY (`id`),
  ADD KEY `aid` (`aid`), ADD
  KEY `uid` (`uid`);


ALTER TABLE `complaint`
  ADD PRIMARY KEY (`id`),
  ADD KEY `aid` (`aid`), ADD
  KEY `uid` (`uid`);


ALTER TABLE `transaction`
  ADD PRIMARY KEY (`id`),
  ADD KEY `bid` (`bid`);
```

```
ALTER TABLE `user`
  ADD PRIMARY KEY (`id`);


 ALTER TABLE `admin`

  MODIFY `id` int(14) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=3;

ALTER TABLE `bill`
  MODIFY  `id`  int(14)  NOT  NULL  AUTO_INCREMENT,  AUTO_INCREMENT=25;
  ALTER TABLE `complaint`
  MODIFY `id` int(14) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=14;

ALTER TABLE `transaction`
  MODIFY `id` int(14) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=25;

ALTER TABLE `user`
  MODIFY `id` int(14) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=12;

ALTER TABLE `bill`
  ADD CONSTRAINT `bill_ibfk_1` FOREIGN KEY (`aid`) REFERENCES `admin`
 (`id`) ON DELETE CASCADE ON UPDATE CASCADE,
  ADD CONSTRAINT `bill_ibfk_2` FOREIGN KEY (`uid`) REFERENCES `user` (`id`)
 ON DELETE CASCADE ON UPDATE CASCADE;


ALTER TABLE `complaint`
  ADD CONSTRAINT `complaint_ibfk_1` FOREIGN KEY (`aid`) REFERENCES
 `admin` (`id`) ON DELETE CASCADE ON UPDATE CASCADE,
  ADD CONSTRAINT `complaint_ibfk_2` FOREIGN KEY (`uid`) REFERENCES `user`
 (`id`) ON DELETE CASCADE ON UPDATE CASCADE;


ALTER TABLE `transaction`
  ADD CONSTRAINT `transaction_ibfk_1` FOREIGN KEY (`bid`) REFERENCES `bill`
```

(`id`) ON DELETE CASCADE ON UPDATE CASCADE;

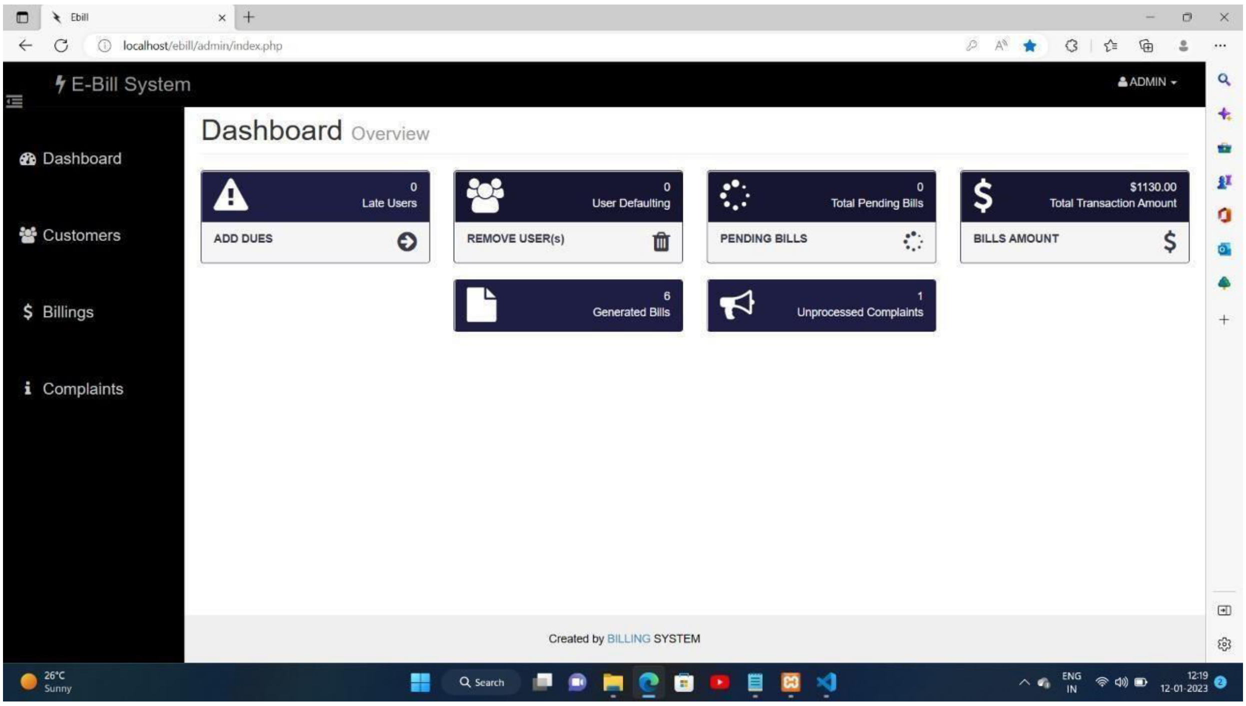
CHAPTER 6

SNAPSHOTS



This website at the end of its construction will act as a consumer oriented service for users for easy payment of their respective **Electricity Bill** as well as interact with their providers in case of any queries or grivances.

Snapshot 6.1.1- Login Page



Dashboard Overview

0 Late Users

0 User Defaulting

0 Total Pending Bills

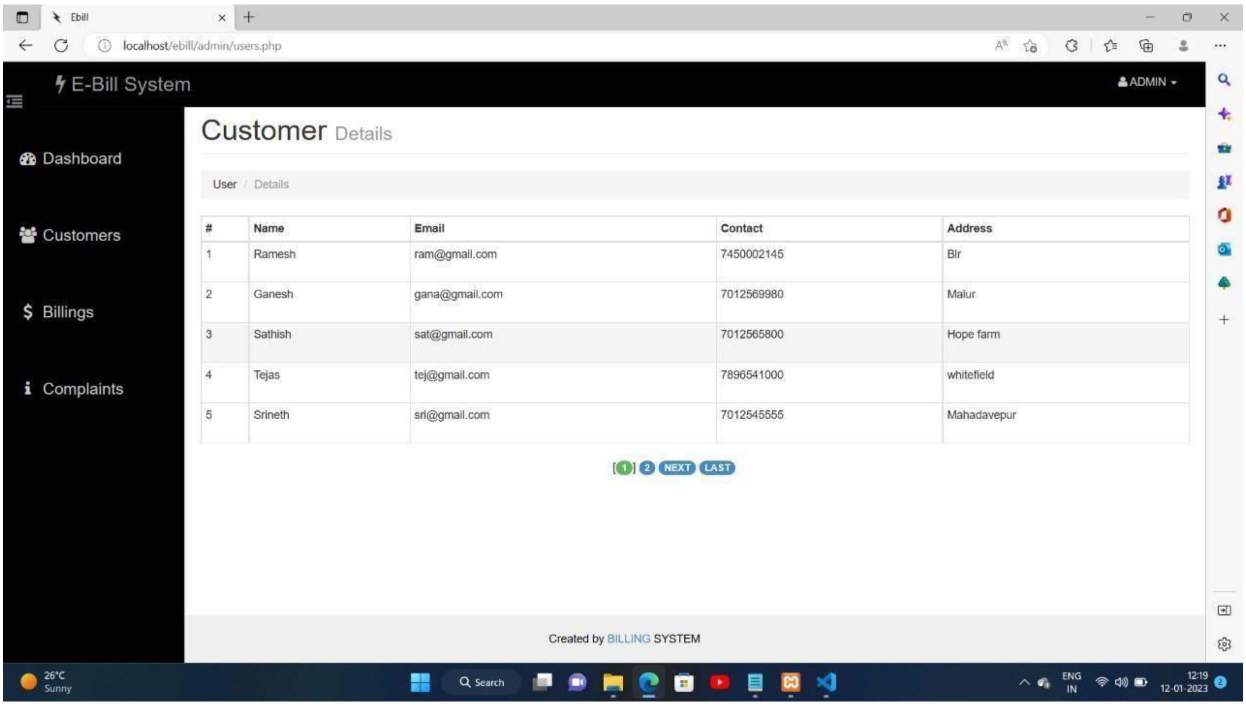
$1130.00 Total Transaction Amount

6 Generated Bills

1 Unprocessed Complaints

Created by BILLING SYSTEM

Snapshot 6.1.2 – Admin Dashboard

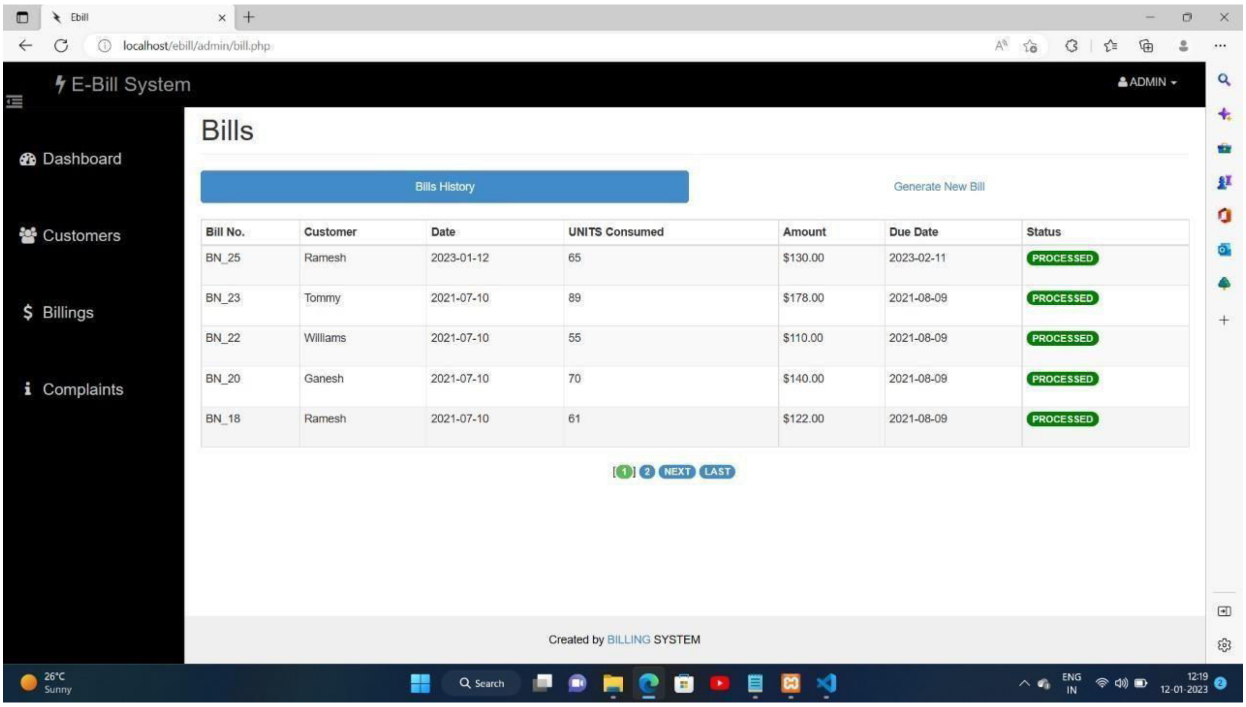


Customer Details

#	Name	Email	Contact	Address
1	Ramesh	ram@gmail.com	7450002145	Blr
2	Ganesh	gana@gmail.com	7012569980	Malur
3	Sathish	sat@gmail.com	7012565800	Hope farm
4	Tejas	tej@gmail.com	7896541000	whitefield
5	Srineth	sri@gmail.com	7012545555	Mahadavepur

Created by BILLING SYSTEM

Snapshot 6.1.3 – Customer Details



Bills

Bills History | Generate New Bill

Bill No.	Customer	Date	UNITS Consumed	Amount	Due Date	Status
BN_25	Ramesh	2023-01-12	65	$130.00	2023-02-11	PROCESSED
BN_23	Tommy	2021-07-10	89	$178.00	2021-08-09	PROCESSED
BN_22	Williams	2021-07-10	55	$110.00	2021-08-09	PROCESSED
BN_20	Ganesh	2021-07-10	70	$140.00	2021-08-09	PROCESSED
BN_18	Ramesh	2021-07-10	61	$122.00	2021-08-09	PROCESSED

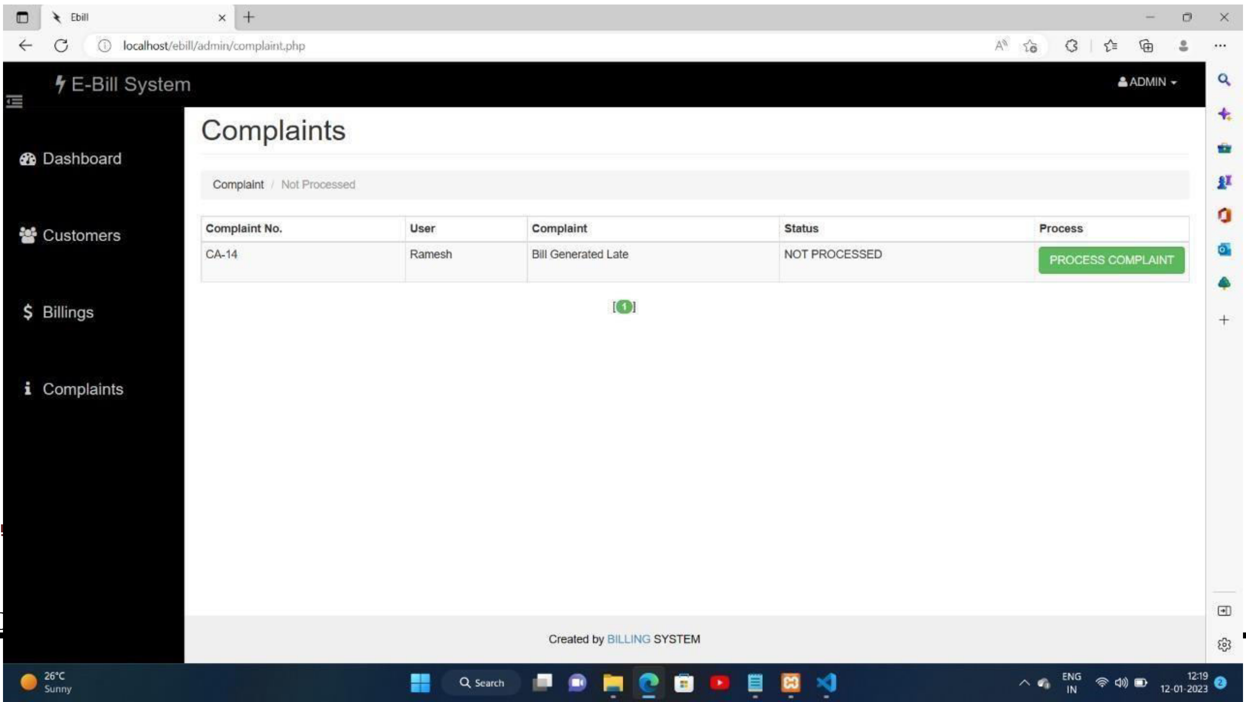
[1] 2 NEXT LAST

Created by BILLING SYSTEM

Snapshot 6.1.4- Bills History Details

Snapshot 6.1.5- Bills Generation

Snapshot 6.1.6- Complaints Details



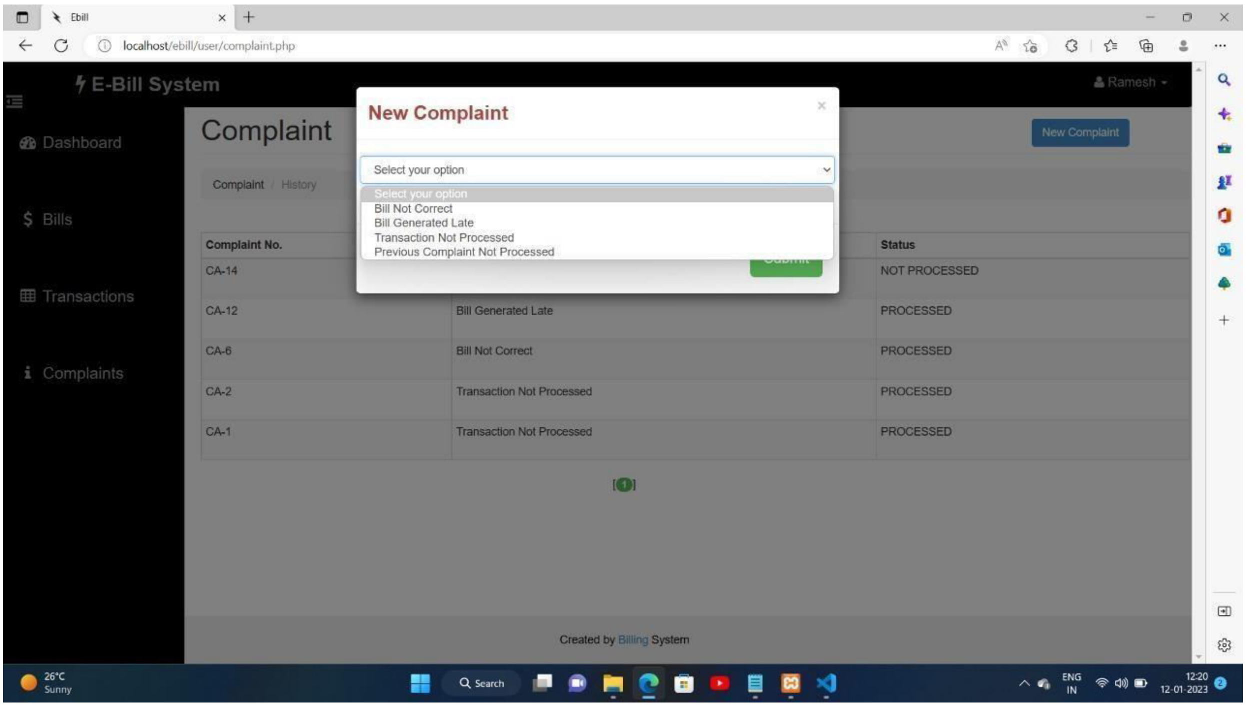
Complaints

Complaint / Not Processed

Complaint No.	User	Complaint	Status	Process
CA-14	Ramesh	Bill Generated Late	NOT PROCESSED	PROCESS COMPLAINT

[1]

Created by BILLING SYSTEM



New Complaint

Select your option

- Select your option
- Bill Not Correct
- Bill Generated Late
- Transaction Not Processed
- Previous Complaint Not Processed

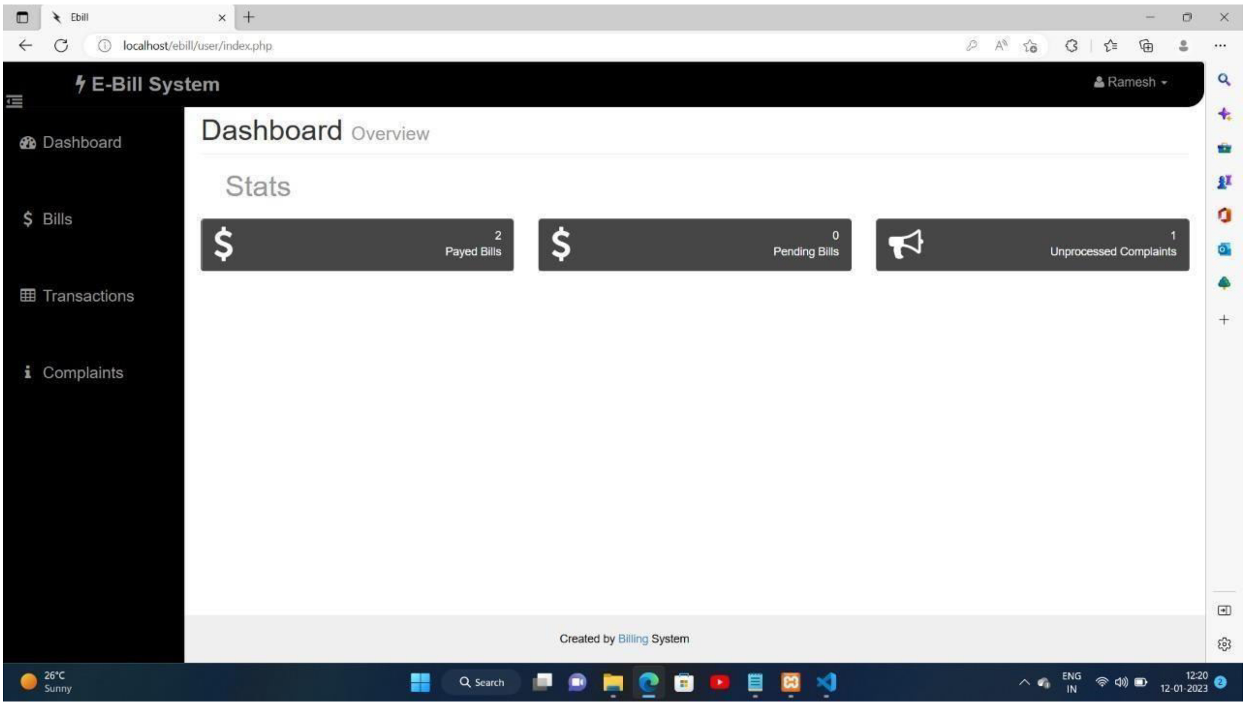
Complaint No.		Status
CA-14		NOT PROCESSED
CA-12	Bill Generated Late	PROCESSED
CA-6	Bill Not Correct	PROCESSED
CA-2	Transaction Not Processed	PROCESSED
CA-1	Transaction Not Processed	PROCESSED

Electricity Bill Management System

Snapshot 6.1.7 - New Complaint Generation

Snapshot 6.1.8 – User Dashboard

CHAPTER 7 CONCLUSION



We have tried to develop a system that can be a great help for the owners of all the EB electricity department to receiving bill from the customer. Despite all our efforts there are some bugs in the system, which are still to be removed. This is possible by the testing being done in the system

We have left all the options open so that if there is any other future requirement in the system by the user for the enhancement of the system then it is possible to implement them.

In summation, the advent of an electricity bill management system heralds a transformative stride towards efficient stewardship of electricity resources. With its suite of functionalities encompassing customer registration, meter reading, billing management, and insightful analytics, the system emerges as a beacon of operational excellence and customer satisfaction.

Moreover, its responsive framework ensures swift resolution of customer concerns, underscoring a commitment to unparalleled service delivery. Whether deployed by utility titans or agile retail providers, this system emerges as a cornerstone in harmonizing energy distribution and consumption. Its implementation not only elevates operational efficiency but also embodies a narrative of sustainability and customer-centricity in the realm of electricity management.

In the last we would like to thanks all the persons involved in the development of the system directly or indirectly. We are also thankful to the VivekNagar South Division Electricity Department [BESCOM] for so much taken by them in helping to develop the system.

We hope that the project will serve its purpose for which it is develop there by underlining success of process.

REFERENCES

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