

# **DMSD - CS 631 (Final)**

## **WALLET Payment Network**

**Prof. Dimitri Theodoratos**

**By:**

**Rishya Murthy – rm875**

**Sanjay Sajjan – ss4454**

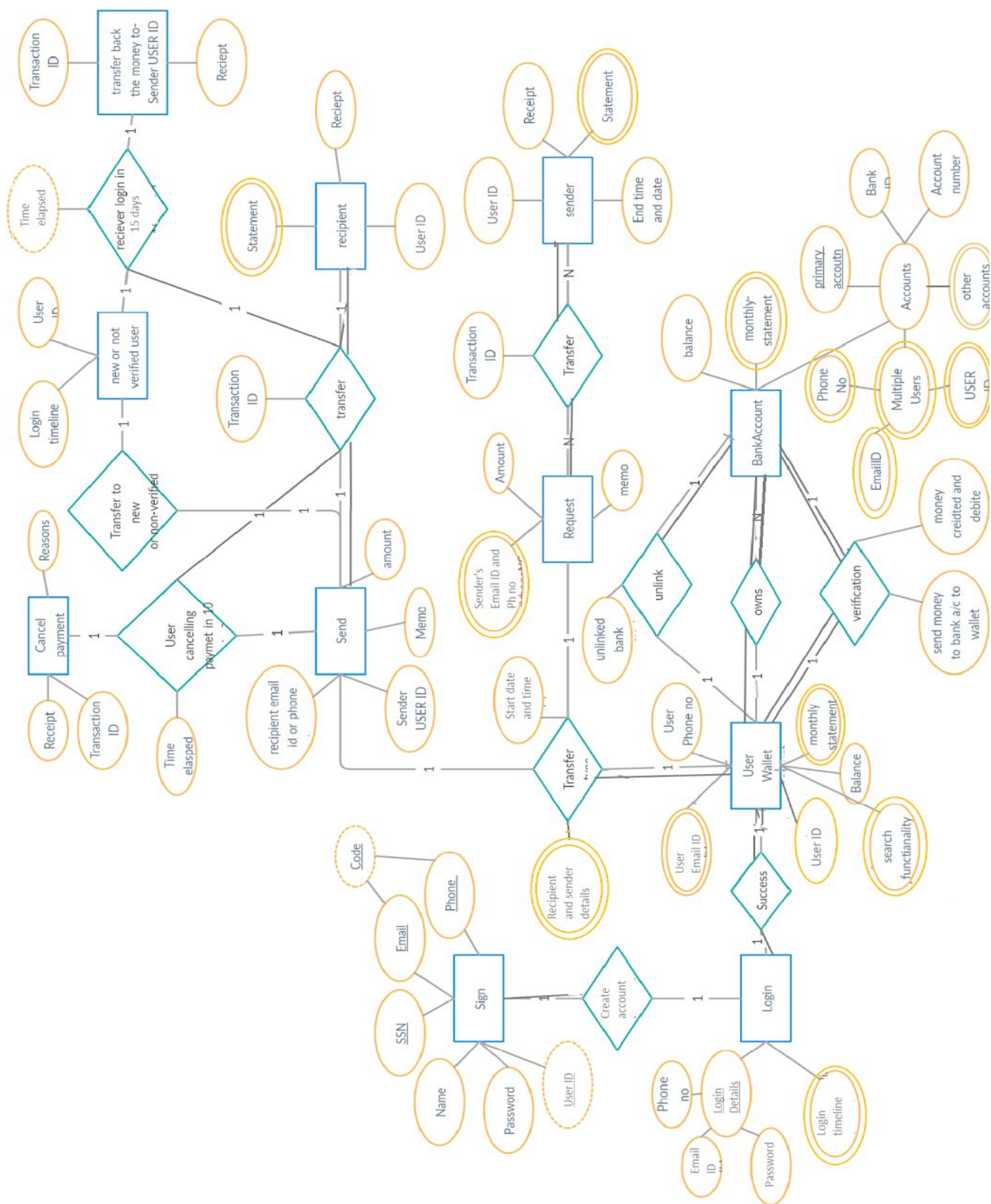
**Shreyas Bhat – sp2677**

### **Outline:**

The main objective of this project is to develop a user friendly 'WALLET Payment Network' which satisfies basic requirements. There are three main phases of database design. Database design is connected with application design. We start with the requirements and the collection analysis phase which produces both data requirements and functional requirements. The data requirements are the source of database design. These requirements must be detailed and complete. The functional requirements are the source of application software design. The phases can be dependent or independent. So, if you want to design a database, you need to start designing it without thinking about the actual database system- just pay attention to your data. After all the requirements have been collected and analyzed, the next step is to create a conceptual schema for the database, using a high level conceptual data model. This schema is described as a conceptual schema.

### **Entity-Relationship (ER):**

The result of this phase is an Entity-Relationship (ER) diagram or UML class diagram which is a high-level data model of the specific application area. The purpose of ER-diagram is to describe the relationship between different entities and what attributes each entity has. It possesses all the definitions of all the entities and attributes. As the conceptual schema design progresses or after it is over, the basic data model operations will be used to go deep in the high-level user operations identified during the functional analysis of data. And in the end this will confirm that the conceptual schema equalizes all the functional requirements.



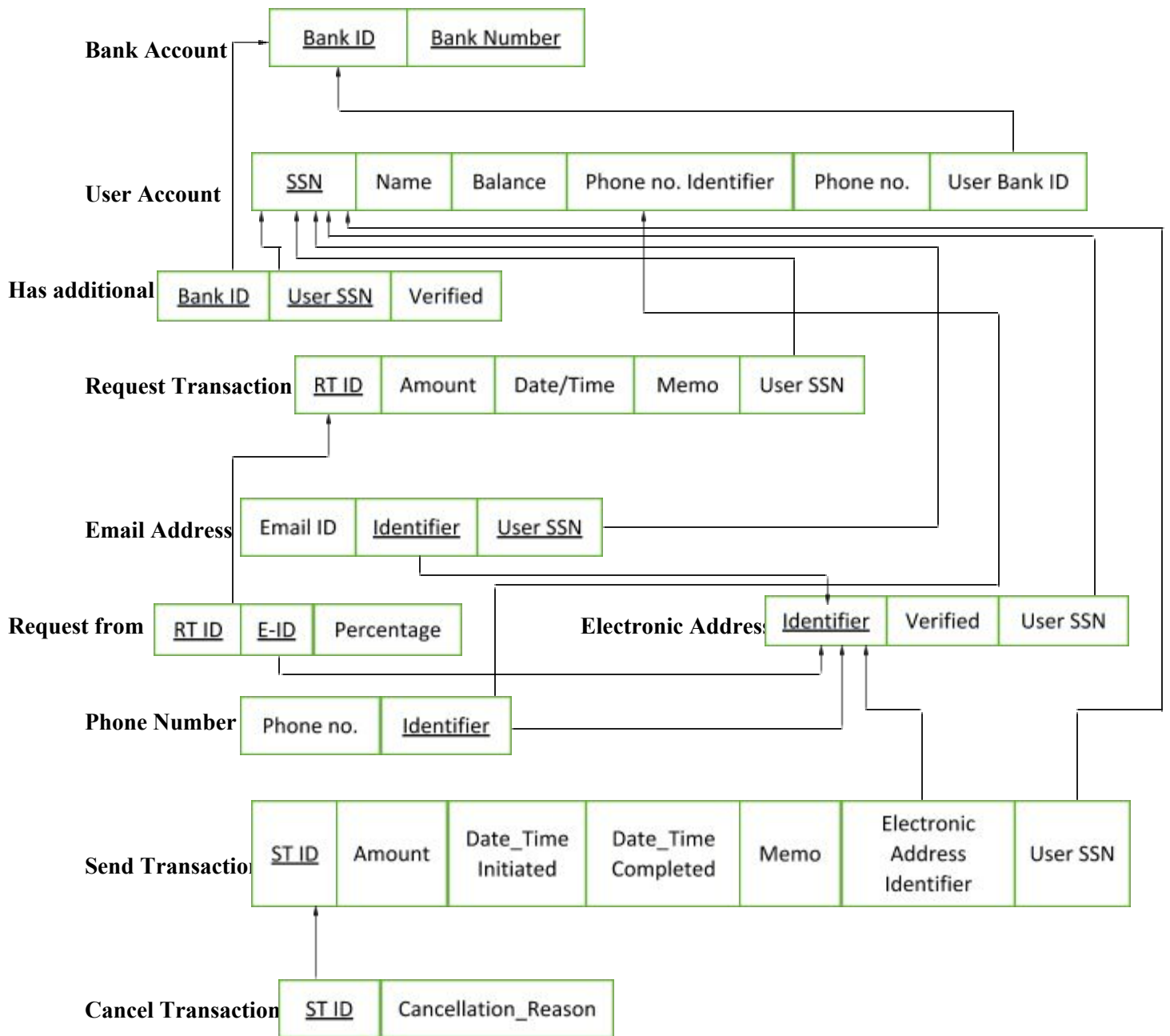
## **Relational database model:**

The relational database model is a logical model for a database in which data are logically organized in two-dimensional tables referred to as relations. A relation is defined as a collection of data representing multiple occurrences of an object, event, or agent. Relational databases are often perceived to be a collection of tables. Consistent with a tabular representation, a relation consists of rows and columns. Rows are referred to as tuples and columns are referred to as attributes.

The goal of this phase of the project is to map the EER Schema done in phase 1 to a Relational Schema. This process involved various steps:

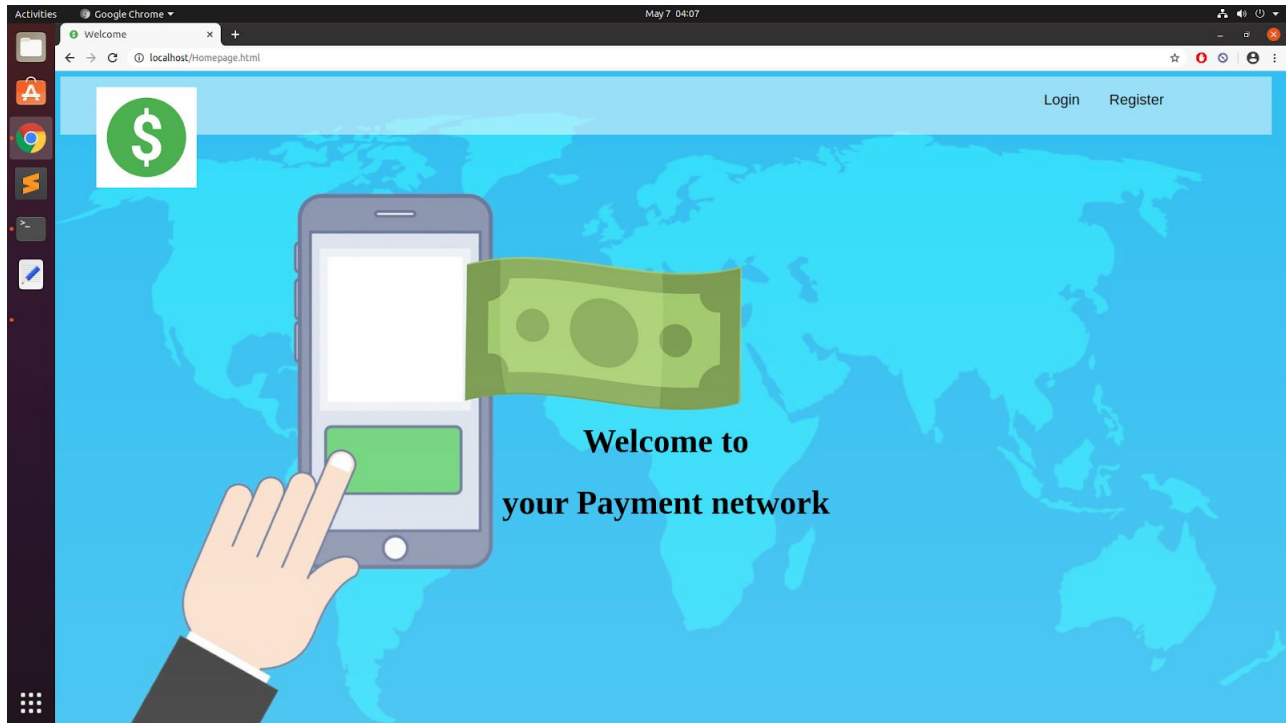
1. Creation of a relation that includes all the simple attributes of each entity.
2. Creation a relation, and include all simple attributes and simple components of composite attributes of the relation for each weak entity type.
3. Identify the relations that correspond to the entity types participating in the relation. Choose one of the relations, and include as foreign key corresponding to the primary key of the other relation.
4. Identify the relation that represents the participating entity type at the N-side of the relationship type.
5. Create a new relation to represent the previous relation for each binary M:N relationship type R.
6. Create a new relation that includes an attribute corresponding to A plus the primary key attribute K (as a foreign key in relation) of the relation that represents the entity type or relationship type that has A as an attribute for each multi-valued attribute A.
7. Create a new relation to represent old relation for each n-ary relationship type,  $n > 2$

We mapped the components of the ER diagram, such as Entities, Attributes, Relationships and also the various types of attributes into a schema form. Thus we created a relational schema on WALLET Payment Network and understood various relationships

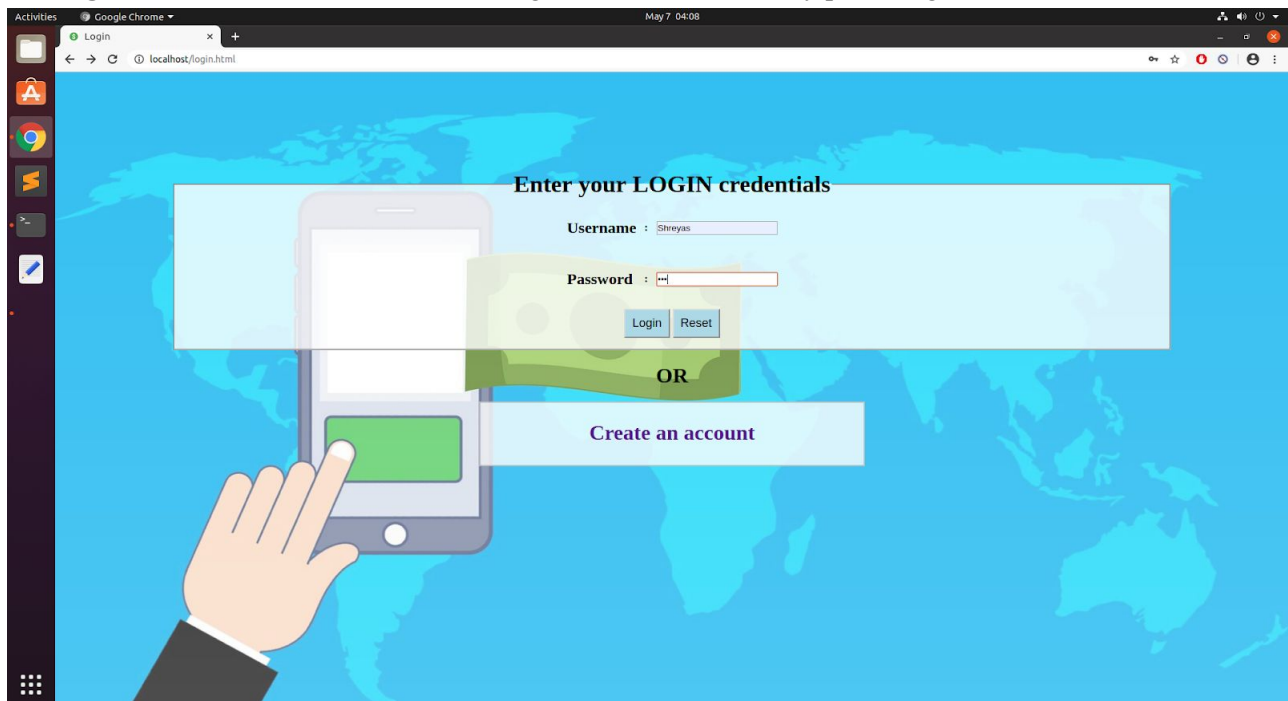


## Database schema, instance and the application programs:

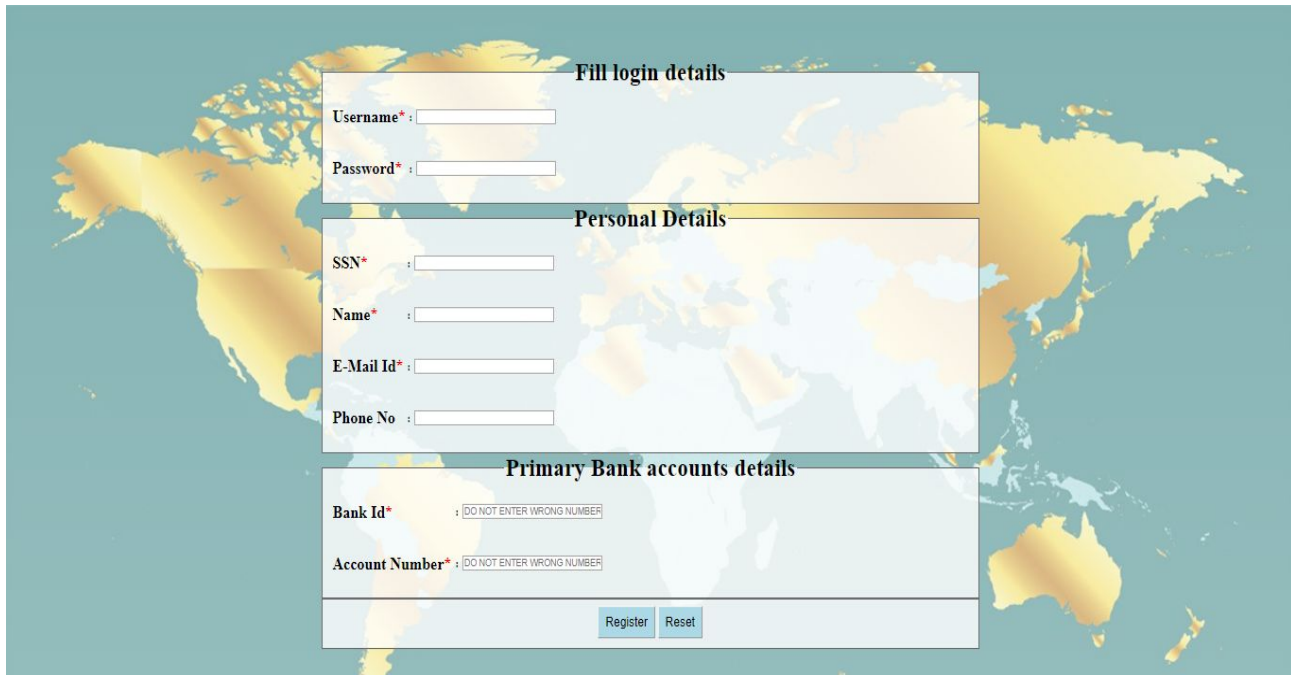
1. **Homepage:** This is the Homepage that greets the user when they visit the website. It has a login and a Register button where the user can either choose to register or if they already have an account they can choose to login.



2. **Login credentials:** The customer will log into his/her account by providing “Username” and “Password”.



3. **Registration:** New user will be able to create his account by providing the following details:



**Fill login details**

Username\* :

Password\* :

**Personal Details**

SSN\* :

Name\* :

E-Mail Id\* :

Phone No :

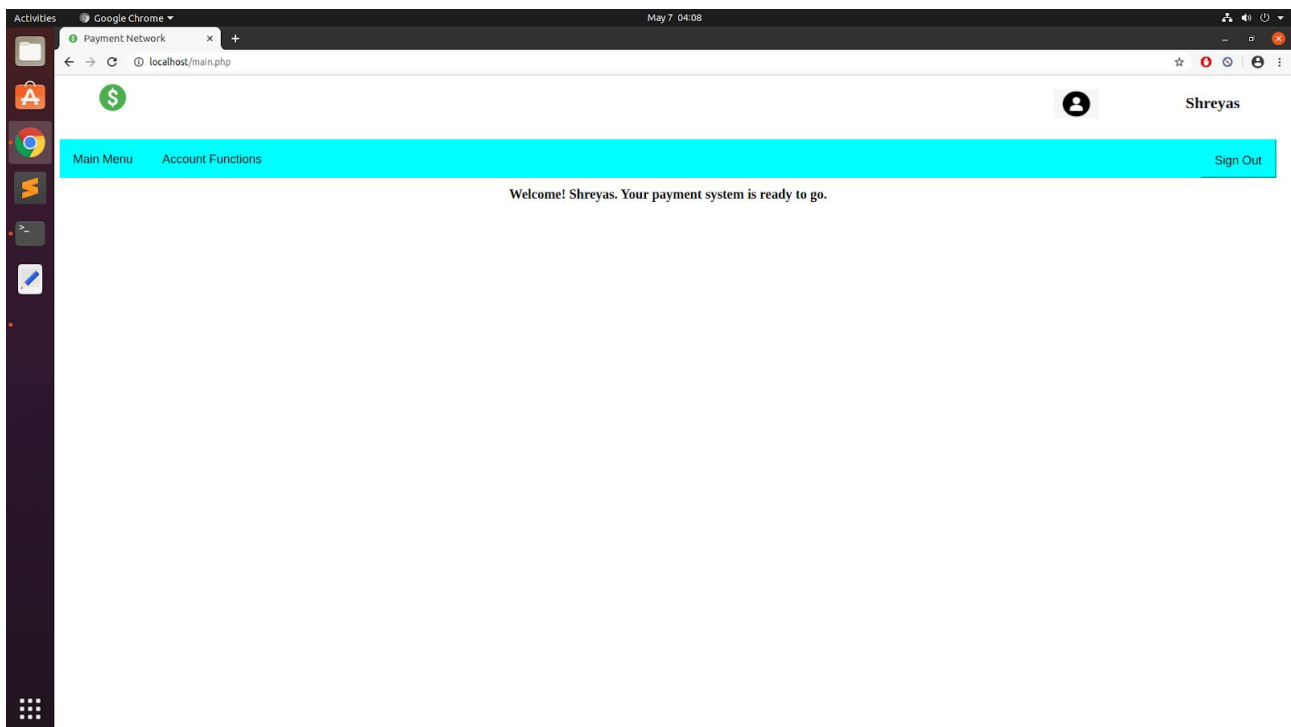
**Primary Bank accounts details**

Bank Id\* : DO NOT ENTER WRONG NUMBER

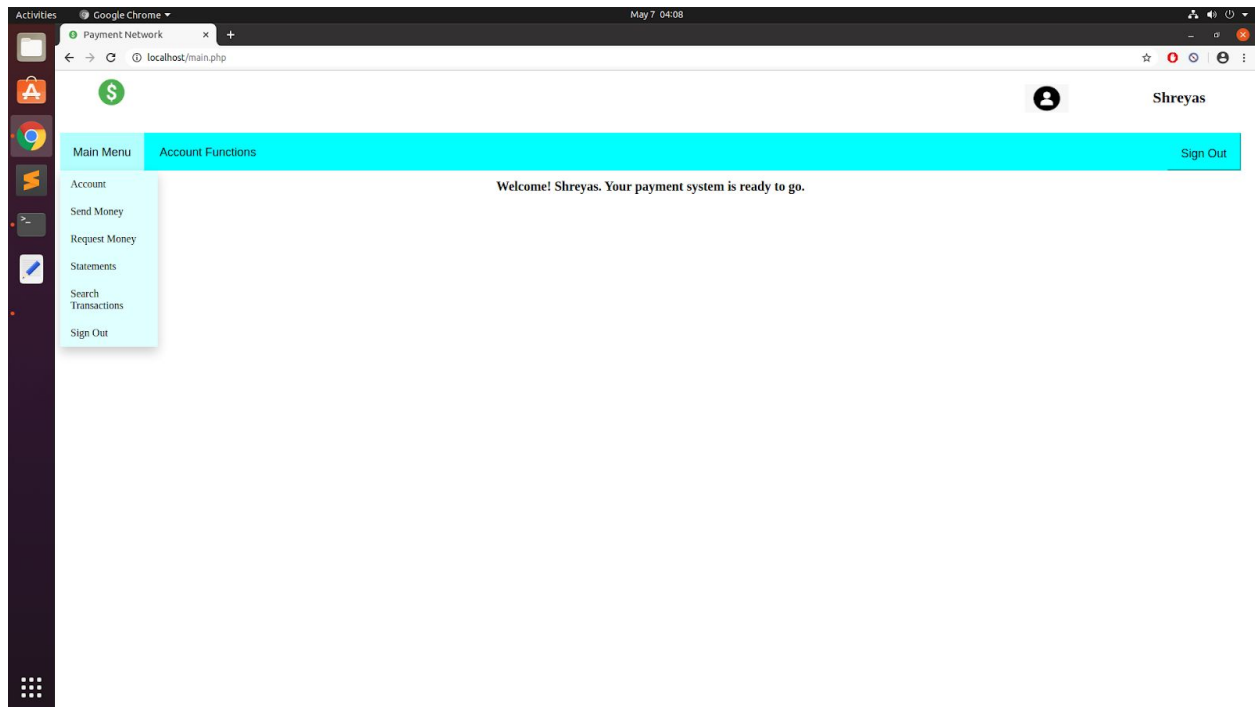
Account Number\* : DO NOT ENTER WRONG NUMBER

[Register](#) [Reset](#)

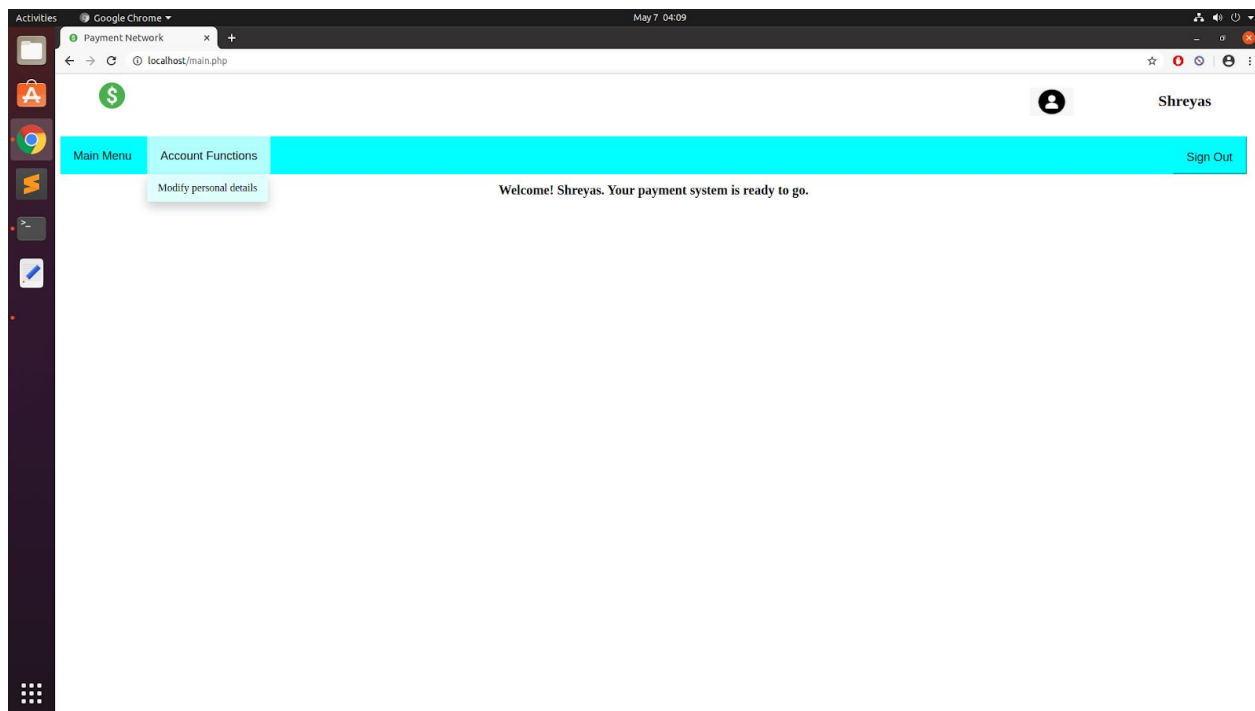
4. **Opening page after log-in:** This is the main page which greets the user after logging in. It has a Main Menu and Account Functions. if the user chooses to log out they can do so by clicking the Sign Out button.



5. **Main Menu:** This is the main menu function where the user can choose any of the options from the drop down menu. It has features like Account Profile, Send Money, Request Transactions, Bank statements, Search Transactions and also has the option to sign out.



6. **Account Functions:** This is the Account function tab where the user can use to modify the details of the account.



7. **Modify Account:** Account details of the customer mentioned along with bank balance, Name, E-mail, Phone number will be displayed here where they have the option to edit. Primary account details are shown, which can be edited. There is also an option to add a new secondary account. If the user chooses to change the details they can do so by clicking the edit function.

Payment Network

localhost/account.php

Shreyas

Sign Out

**Personal Details**

Name : Shreyas Bhat [edit](#)

E-Mail : shre@g.cm [edit](#)

Phone : 973652659 [edit](#)

**Bank Details**

**Primary Account**

Bank Id	Account Number	Status	
Chase01	10001001	Verified	<a href="#">edit</a>

**Secondary Accounts**

Bank Id	Account Number	Status	
AmExp01	10010110	Verified	<a href="#">edit</a>

[Add](#)

8. **Sending money:** Customers can send money via ewallet by entering the Recipient's details and the amount to be transferred and a note if necessary.

Payment Network

localhost/sendingmoney.php

san@g.cm

Sign Out

**Recipient identifier\*** :

**Amount\*** :

**Primary Account**

**Memo** :

[Send Money](#) [Reset](#)



9. **Requesting money:** Customers can request money via ewallet by entering the recipient's details and the amount required, along with a note if necessary.

Requesting person identifier\* :

Amount\* :

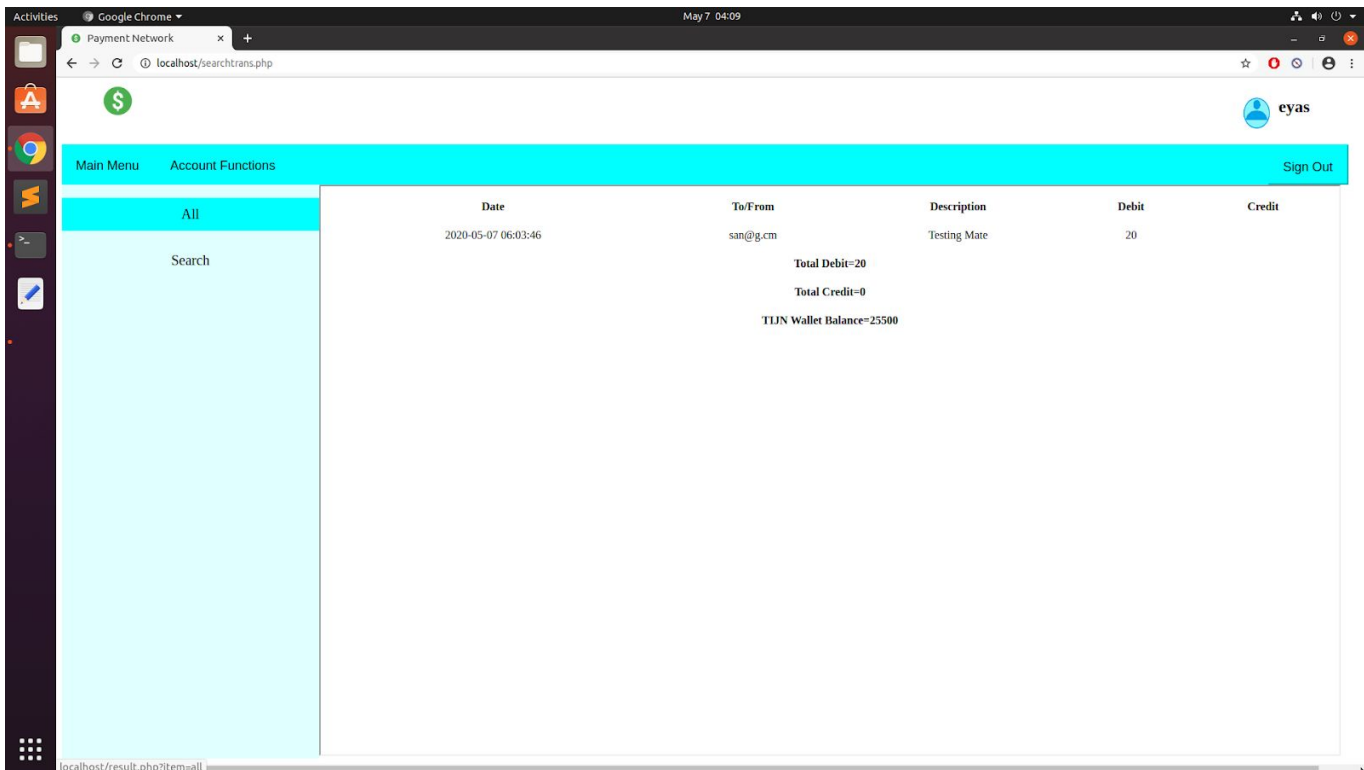
Memo :

10. **Statements and Pending Requests:** All statements being displayed with total credit, total debit and wallet balance along with date, to/from and description. The pending requests are also shown here.

Date	Person	Description	Amount
2020-05-07 06:06:51	san@g.cm	Gimme My money back mate	20

Date	To/From	Description	Debit	Credit
2020-05-07 06:03:46	san@g.cm	Testing Mate	20	

11. **All Transactions:** All the transactions made by the user are shown here.



The screenshot shows a web application interface for 'Payment Network' with a user named 'eyas'. The page displays a table of transactions under the 'All' filter. The table has columns for Date, To/From, Description, Debit, and Credit. A search bar is visible on the left. Summary statistics are shown at the bottom of the table.

Date	To/From	Description	Debit	Credit
2020-05-07 06:03:46	san@ig.cm	Testing Mate	20	

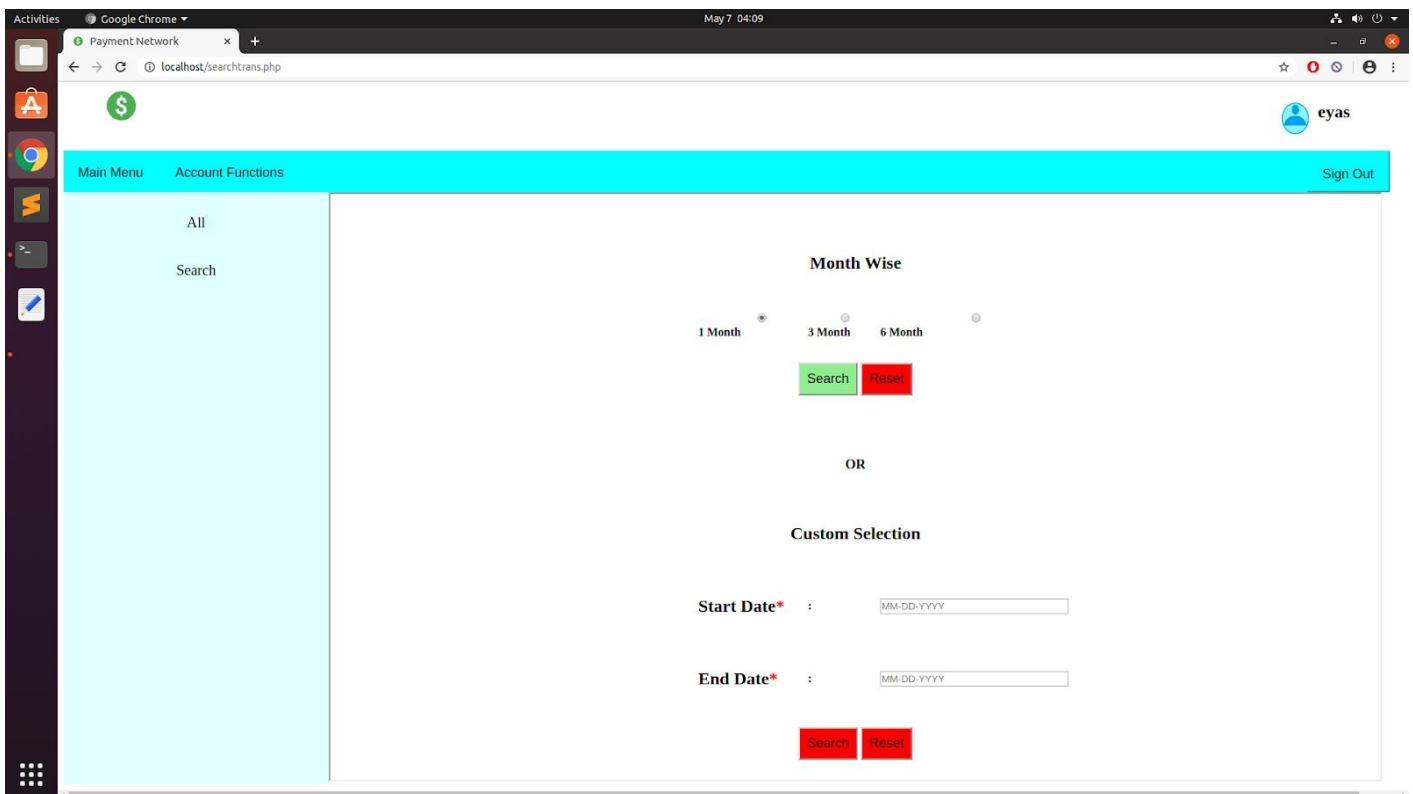
Summary Statistics:

- Total Debit=20
- Total Credit=0
- TJIN Wallet Balance=25500

## 12. Month-wise and Custom transactions:

*The User will enter the start date and end date to the month-wise statements.*

*Example : If the user wants to get January statement, user will enter start date : 01/01/2020 and end date : 31/01/2020.*



The screenshot shows the same web application interface, but with the 'Month Wise' and 'Custom Selection' filters visible. The 'Month Wise' section has radio buttons for '1 Month', '3 Month', and '6 Month'. Below these are 'Search' and 'Reset' buttons. The 'Custom Selection' section has input fields for 'Start Date\*' and 'End Date\*', each with a placeholder 'MM-DD-YYYY'. Below these are also 'Search' and 'Reset' buttons.

**Month Wise**

1 Month 3 Month 6 Month

Search Reset

OR

**Custom Selection**

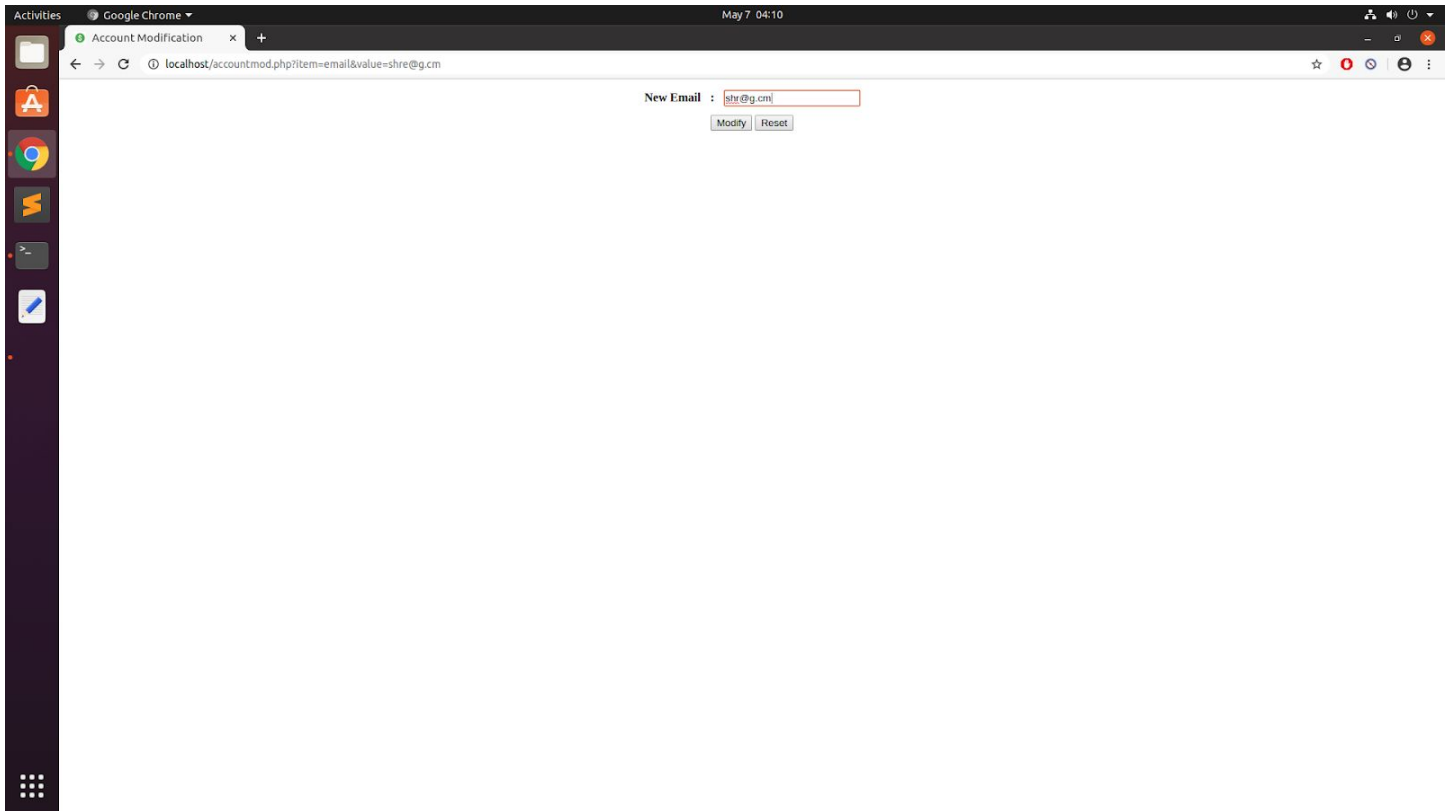
Start Date\* : MM-DD-YYYY

End Date\* : MM-DD-YYYY

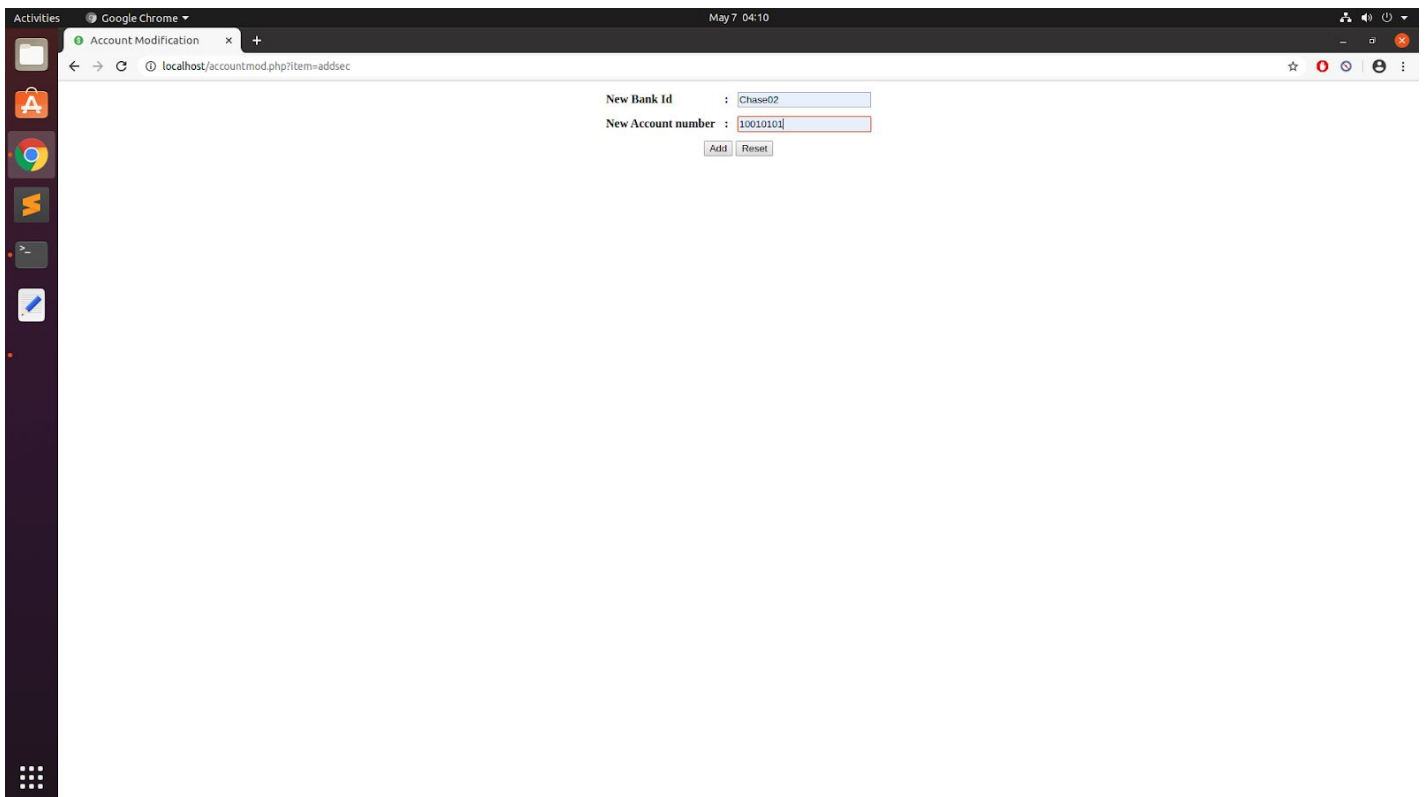
Search Reset

## Other features:

### 1. Edit the phone number



### 2. Adding New Bank ID and Bank Number :



## SQL commands to create Database, Tables, Data, Keys and Constraints:

```
-- phpMyAdmin SQL Dump
-- version 5.0.2
-- https://www.phpmyadmin.net/
--
-- Host: localhost
-- Generation Time: May 07, 2020 at 10:03 AM
-- Server version: 10.4.11-MariaDB
-- PHP Version: 7.4.5

SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
START TRANSACTION;
SET time_zone = "+00:00";

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8mb4 */;

--
-- Database: `cs631`
--

--
-- Table structure for table `account_modification`
--

CREATE TABLE `account_modification` (
  `name` varchar(25) NOT NULL,
  `ssn` int(9) NOT NULL,
  `email` varchar(9) NOT NULL,
  `phone` varchar(9) NOT NULL,
  `primaryacc` int(10) NOT NULL,
  `secondaryacc` int(10) DEFAULT NULL,
  `addsec` int(10) DEFAULT NULL,
  `secondaryemail` varchar(9) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `account_modification`
--

INSERT INTO `account_modification` (`name`, `ssn`, `email`, `phone`, `primaryacc`, `secondaryacc`, `addsec`, `secondaryemail`) VALUES
('Ben Strokes', 99890000, 'ben@g.cm', '', 10010110, 10010101, NULL, 'bens@g'),
('Andrew', 99890010, 'andw@g.cm', '', 10010110, 10010101, NULL, 'andrew@g');
```

-----

--  
-- Table structure for table `bank\_account`  
--

```
CREATE TABLE `bank_account` (  
  `bankid` varchar(9) NOT NULL,  
  `banumber` int(10) NOT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

--  
-- Dumping data for table `bank\_account`  
--

```
INSERT INTO `bank_account` (`bankid`, `banumber`) VALUES  
('AmExp01', 10010110),  
('Chase01', 10001001),  
('Chase02', 10010101);
```

-----

--  
-- Table structure for table `electronic\_address`  
--

```
CREATE TABLE `electronic_address` (  
  `identifier` varchar(9) NOT NULL,  
  `ssn` int(9) DEFAULT NULL,  
  `type` varchar(15) DEFAULT NULL,  
  `verified` tinyint(1) DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

--  
-- Dumping data for table `electronic\_address`  
--

```
INSERT INTO `electronic_address` (`identifier`, `ssn`, `type`, `verified`) VALUES  
('91191191', 1234567890, 'phone', 1),  
('9343899', 123456789, 'phone', 1),  
('97343891', 99890100, 'phone', 1),  
('97343892', 99890000, 'phone', 1),  
('97343893', 99890010, 'phone', 1),  
('97343894', 99890011, 'phone', 1),  
('97343895', 99890001, 'phone', 1),  
('973652659', 98563254, 'phone', 1),  
('adam@g.cm', 99890011, 'email', 1),  
('andr@g.cm', 99890010, 'email', 1),  
('ben@g.cm', 99890000, 'email', 1),
```

```
('feck@g.cm', 123456789, 'email', 1),
('john@g.cm', 99890001, 'email', 1),
('joy@g.cm', 88888888, 'email', 1),
('rafe@g.cm', 99890100, 'email', 1),
('san@g.cm', 1234567890, 'email', 1),
('shre@g.cm', 98563254, 'email', 1);
```

```
-- -----
```

```
--
-- Table structure for table `email`
--
```

```
CREATE TABLE `email` (
  `ssn` int(9) NOT NULL,
  `email` varchar(9) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```
--
-- Dumping data for table `email`
--
```

```
INSERT INTO `email` (`ssn`, `email`) VALUES
(99890000, 'ben@g.cm'),
(99890001, 'john@g.cm'),
(99890010, 'andr@g.cm'),
(99890011, 'adam@g.cm'),
(99890100, 'rafe@g.cm'),
(1234567890, 'san@g.cm');
```

```
-- -----
```

```
--
-- Table structure for table `has_additional`
--
```

```
CREATE TABLE `has_additional` (
  `ssn` int(9) NOT NULL,
  `bankid` varchar(9) NOT NULL,
  `banumber` int(10) NOT NULL,
  `verified` int(11) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```
--
-- Dumping data for table `has_additional`
--
```

```
INSERT INTO `has_additional` (`ssn`, `bankid`, `banumber`, `verified`) VALUES
(98563254, 'AmExp01', 10010110, 1),
(98563254, 'Chase02', 10010101, 1),
```

```
(99890001, 'AmExp01', 10010110, NULL),  
(99890010, 'Chase02', 10010101, NULL);
```

```
-- -----
```

```
--  
-- Table structure for table `login`  
--
```

```
CREATE TABLE `login` (  
  `username` varchar(25) NOT NULL,  
  `password` varchar(10) NOT NULL,  
  `regtime` datetime NOT NULL,  
  `ssn` int(9) DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```
--  
-- Dumping data for table `login`  
--
```

```
INSERT INTO `login` (`username`, `password`, `regtime`, `ssn`) VALUES  
('ben@g.cm', 'qwerty', '2016-12-22 09:27:58', 99890000),  
('john@g.cm', '1234', '2020-05-03 11:12:51', 123456789),  
('san@g.cm', 'sanjay', '2020-05-03 11:12:51', 1234567890),  
('Shreyas', '123', '2020-05-07 06:02:24', 98563254);
```

```
-- -----
```

```
--  
-- Table structure for table `phone`  
--
```

```
CREATE TABLE `phone` (  
  `phone` varchar(9) NOT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```
--  
-- Dumping data for table `phone`  
--
```

```
INSERT INTO `phone` (`phone`) VALUES  
('97343891'),  
('97343892'),  
('97343893'),  
('97343894'),  
('97343895'),  
('97343899');
```

```
-- -----
```

```

--
-- Table structure for table `request_transaction`
--

CREATE TABLE `request_transaction` (
  `rtid` int(11) NOT NULL,
  `amount` int(11) NOT NULL,
  `datestamp` datetime NOT NULL DEFAULT current_timestamp(),
  `memo` varchar(50) DEFAULT NULL,
  `ssn` int(9) NOT NULL,
  `identifier` varchar(9) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `request_transaction`
--

INSERT INTO `request_transaction` (`rtid`, `amount`, `datestamp`, `memo`, `ssn`, `identifier`) VALUES
(4, 20, '2020-05-07 06:06:51', 'Gimme My money back mate', 98563254, 'san@g.cm'),
(5, 20, '2020-05-07 07:56:48', 'asa', 99890000, 'san@g.cm');

-----

--
-- Table structure for table `rfrom`
--

CREATE TABLE `rfrom` (
  `rtid` int(11) NOT NULL,
  `identifier` varchar(9) NOT NULL,
  `percentage` double DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `rfrom`
--

INSERT INTO `rfrom` (`rtid`, `identifier`, `percentage`) VALUES
(1, 'ben@g.cm', 100),
(2, 'john@g.cm', 100),
(3, 'ben@g.cm', 100),
(4, 'san@g.cm', 100),
(5, 'san@g.cm', 100);

-----

--
-- Table structure for table `send_transaction`
--

```



```

CREATE TABLE `send_transaction` (
  `stid` int(11) NOT NULL,
  `amount` int(11) NOT NULL,
  `datestamp` datetime NOT NULL DEFAULT current_timestamp(),
  `memo` varchar(50) DEFAULT NULL,
  `cancelled` varchar(50) DEFAULT NULL,
  `ssn` int(9) NOT NULL,
  `identifier` varchar(9) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `send_transaction`
--

INSERT INTO `send_transaction` (`stid`, `amount`, `datestamp`, `memo`, `cancelled`, `ssn`, `identifier`) VALUES
(1, 250, '2020-05-02 02:32:05', 'tired', '0', 888888888, 'ben@g.cm'),
(2, 20, '2020-05-03 23:13:39', 'test', '0', 123456789, 'ben@g.cm'),
(3, 20, '2020-05-03 23:14:13', 'test', '0', 123456789, 'ben@g.cm'),
(4, 20, '2020-05-07 06:03:46', 'Testing Mate', '0', 98563254, 'san@g.cm');

-----

--
-- Table structure for table `user_account`
--

CREATE TABLE `user_account` (
  `ssn` int(9) NOT NULL,
  `name` varchar(25) NOT NULL,
  `bankid` varchar(9) NOT NULL,
  `banumber` int(10) NOT NULL,
  `pbaverified` varchar(1) DEFAULT NULL,
  `phone` varchar(9) DEFAULT NULL,
  `balance` double DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `user_account`
--

INSERT INTO `user_account` (`ssn`, `name`, `bankid`, `banumber`, `pbaverified`, `phone`, `balance`) VALUES
(888888888, 'Test', 'Chase01', 10001001, '1', NULL, 10000),
(98563254, 'Shreyas Bhat', 'Chase01', 10001001, '1', '973569856', 25500),
(99890000, 'Ben Stokes', 'AmExp01', 10010110, '1', '97343892', 10020),
(99890001, 'John Smith', 'Chase01', 10001001, '1', '97343895', 10000),
(99890010, 'Andrew', 'AmExp01', 10010110, '1', '97343893', 10000),
(99890011, 'Adam Hill', 'Chase01', 10001001, '1', '97343894', 10000),
(99890100, 'Rafe Nadal', 'AmExp01', 10010110, '1', '97343891', 10000),
(123456789, 'Testr', 'Chase01', 10001001, '1', '97343899', 10000),
(1234567890, 'sanjay', 'Chase01', 10001001, '1', '91191191', 9980);

```

```

--
-- Indexes for dumped tables
--

--
-- Indexes for table `account_modification`
--
ALTER TABLE `account_modification`
  ADD PRIMARY KEY (`ssn`);

--
-- Indexes for table `bank_account`
--
ALTER TABLE `bank_account`
  ADD PRIMARY KEY (`bankid`,`banumber`);

--
-- Indexes for table `electronic_address`
--
ALTER TABLE `electronic_address`
  ADD PRIMARY KEY (`identifier`);

--
-- Indexes for table `email`
--
ALTER TABLE `email`
  ADD PRIMARY KEY (`email`),
  ADD KEY `emailssnfk` (`ssn`);

--
-- Indexes for table `has_additional`
--
ALTER TABLE `has_additional`
  ADD PRIMARY KEY (`ssn`,`bankid`,`banumber`),
  ADD KEY `hasadditionlbankidnumfk` (`bankid`,`banumber`);

--
-- Indexes for table `login`
--
ALTER TABLE `login`
  ADD PRIMARY KEY (`username`,`password`);

--
-- Indexes for table `phone`
--
ALTER TABLE `phone`
  ADD PRIMARY KEY (`phone`);

--

```

```

-- Indexes for table `request_transaction`
--
ALTER TABLE `request_transaction`
  ADD PRIMARY KEY (`rtid`),
  ADD KEY `reqssnfk` (`ssn`);

--
-- Indexes for table `rfrom`
--
ALTER TABLE `rfrom`
  ADD PRIMARY KEY (`rtid`,`identifier`),
  ADD KEY `frommidfk` (`identifier`);

--
-- Indexes for table `send_transaction`
--
ALTER TABLE `send_transaction`
  ADD PRIMARY KEY (`stid`),
  ADD KEY `stssnfk` (`ssn`),
  ADD KEY `sendtransidfk` (`identifier`);

--
-- Indexes for table `user_account`
--
ALTER TABLE `user_account`
  ADD PRIMARY KEY (`ssn`),
  ADD KEY `bankidnumfk` (`bankid`,`banumber`);

--
-- AUTO_INCREMENT for dumped tables
--
--
-- AUTO_INCREMENT for table `request_transaction`
--
ALTER TABLE `request_transaction`
  MODIFY `rtid` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=6;

--
-- AUTO_INCREMENT for table `rfrom`
--
ALTER TABLE `rfrom`
  MODIFY `rtid` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=6;

--
-- AUTO_INCREMENT for table `send_transaction`
--
ALTER TABLE `send_transaction`
  MODIFY `stid` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=5;

```

```

--
-- Constraints for dumped tables
--

--
-- Constraints for table `account_modification`
--
ALTER TABLE `account_modification`
  ADD CONSTRAINT `accmodfk` FOREIGN KEY (`ssn`) REFERENCES `user_account` (`ssn`);

--
-- Constraints for table `email`
--
ALTER TABLE `email`
  ADD CONSTRAINT `emailidfk` FOREIGN KEY (`email`) REFERENCES `electronic_address` (`identifier`) ON
  UPDATE CASCADE;

--
-- Constraints for table `has_additional`
--
ALTER TABLE `has_additional`
  ADD CONSTRAINT `hasadditionalfk` FOREIGN KEY (`ssn`) REFERENCES `user_account` (`ssn`) ON UPDATE
  CASCADE,
  ADD CONSTRAINT `hasadditionlbankidnumfk` FOREIGN KEY (`bankid`,`banumber`) REFERENCES
  `bank_account` (`bankid`,`banumber`);

--
-- Constraints for table `request_transaction`
--
ALTER TABLE `request_transaction`
  ADD CONSTRAINT `reqssnfk` FOREIGN KEY (`ssn`) REFERENCES `user_account` (`ssn`) ON UPDATE
  CASCADE;

--
-- Constraints for table `rfrom`
--
ALTER TABLE `rfrom`
  ADD CONSTRAINT `frommidfk` FOREIGN KEY (`identifier`) REFERENCES `electronic_address` (`identifier`);

--
-- Constraints for table `user_account`
--
ALTER TABLE `user_account`
  ADD CONSTRAINT `bankidnumfk` FOREIGN KEY (`bankid`,`banumber`) REFERENCES `bank_account` (`bankid`,
  `banumber`) ON UPDATE CASCADE;
COMMIT;

/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;

```

## PHP File Samples :

### 1. Send money.php

```
<?php

session_start();
if(!empty($_SESSION['login_user']))
{
    $user=$_SESSION['login_user'];
    $ssn=$_SESSION['utin'];
}

else
{
    header('Location: login.html');
}

?>

<html>
<head>
    <title>Payment Network</title>

    <link rel="stylesheet" type="text/css" href="mainstyle.css">
    <link rel="icon" type="image/png" href="icon1.png">
    <style>

        .input
        {
            width: 140%;
            padding: 5;
        }

        .inp
        {
            cursor: pointer;
            padding: 10px;
            font-size: 18px;
            text-align: center;
            background-color: red;
        }

        .inp:hover
        {
            background-color: lightgreen;
        }
    </style>
</head>
<body>
```

```

<div id="header">
    <div id="header1">
        <div style="float: left;position: relative;left: 3%; right: 3%;">
            
        </div>
        <div style="float: right;position: relative;right: 3%;">
            <h2><?php if (!empty($_SESSION['login_user'])) {
                echo "$user";
            }
            else
            {
                echo "Guest User";
            } ?></h2>
        </div>

        <div style="float: right;position: relative;top: 15%;left: 1%;">
            
        </div>
    </div>

    <div id="header2">
        <div class="drop">
            <button class="menus">Main Menu</button>
            <div class="menu-content">
                <a href="account.php">Account</a>
                <a href="sendmoney.php">Send Money</a>
                <a href="requestmoney.php">Request Money</a>
                <a href="statement.php">Statements</a>
                <a href="searchtrans.php">Search Transactions</a>
                <a href="signout.php">Sign Out</a>
            </div>
        </div>

        <div class="drop">
            <button class="menus">Account Functions</button>
            <div class="menu-content">
                <a href="account.php">Modify personal details</a>
            </div>
        </div>

        <?php
            if (!empty($_SESSION['login_user']))
            {
                echo '<div style="float: right; ">
                    <a href="signout.php"><button class="signout">Sign
Out</button></a>
                </div>';
            }
        </div>
    </div>

```

```

    }

    else
    {
        echo '<div style="float: right;">
            <a href="register.html"><button
class="signin">Register</button></a>
            </div>

            <div style="float: right;">
                <a href="login.html"><button
class="signin">Sign In</button></a>
            </div>;
    }

?>
</div>
</div>

<?php
include("conf.php");

$query = "SELECT * FROM has_additional WHERE ssn = '$ssn'";
$run = mysqli_query($con,$query) or die("ERROR: Resource not available....." .
mysqli_error($con));

?>

<div id="body" style="overflow-y: auto;">
    <br><br>
    <center>
        <form action="transaction.php?item=send" method="POST">
            <table cellpadding="15">
                <tr>
                    <td><b><span class="acctable">Recipient identifier<b
style="color: red;">*</b></span></b></td>
                    <td><b><span class="acctable">:</span></b></td>
                    <td><b><span class="acctable"><input class="input"
type="text" name="identifier" title="Give Recipient E-Mail or phone" required></span></b></td>
                </tr>

                <tr>
                    <td><b><span class="acctable">Amount<b style="color:
red;">*</b></span></b></td>
                    <td><b><span class="acctable">:</span></b></td>
                    <td><b><span class="acctable"><input class="input"
type="text" name="amount" title="Amount" required></span></b></td>
                </tr>

            </table>
        </form>
    </center>
</div>

```

```
<td> </td>>
```

```
</tr>
```

```
<td> </td>>
```

```
<td colspan="2"><b><span class="acctable"><input type="radio" name="selacc" value="priacc" checked=""> Primary Account</span></b></td>>
```

```
</tr>
```

```
<?php
```

```
if (mysqli_num_rows($run) > 0)
```

```
{
```

```
while ($data = mysqli_fetch_assoc($run))
```

```
{
```

```
    echo "<tr><td> </td>";
```

```
    echo '<td colspan="2"><b><span class="acctable"><input type="radio" name="selacc" value="' . $data["bankid"] . ':' . $data["banumber"] . "' > Bankid:' . $data["bankid"] . 'Account No:' . $data["banumber"] .'</span></b></td>';
```

```
    echo "</tr>";
```

```
}
```

```
}
```

```
?>
```

```
<tr>
```

```
<td> </td>>
```

```
</tr>
```

```
<tr>
```

```
<td><b><span class="acctable">Memo</span></b></td>>
```

```
<td><b><span class="acctable">:</span></b></td>>
```

```
<td><b><span class="acctable"><textarea class="input"
```

```
name="memo" title="Optional description"></textarea></span></b></td>>
```

```
</tr>
```

```
<tr>
```

```
<td colspan="3"><center><b><span class="acctable"><input type="submit" name="submit" value="Send Money" class="inp"> <input type="reset" name="reset" value="Reset" class="inp"></span></b></center></td>>
```

```
</tr>
```

```
</table>
```

```
</form>
```

```
</center>
```

```
</div>
```

```
<?php mysqli_close($con);?>
```

```
</body>
```

```
</html>
```



## 2. Request money.php

```
<?php

session_start();
if(!empty($_SESSION['login_user']))
{
    $user=$_SESSION['login_user'];
    $ssn=$_SESSION['utin'];
}

else
{
    header('Location: login.html');
}

?>

<html>
<head>
    <title>Payment Network</title>

    <link rel="stylesheet" type="text/css" href="mainstyle.css">
    <link rel="icon" type="image/png" href="icon1.png">

    <style>

        .input
        {
            width: 140%;
            padding: 5;
        }

        .inp
        {
            cursor: pointer;
            padding: 10px;
            font-size: 18px;
            text-align: center;
            background-color: lightblue;
        }

        .inp:hover
        {
            background-color: lightgreen;
        }
    </style>
</head>
<body>
```

```

<div id="header">
    <div id="header1">
        <div style="float: left;position: relative;left: 3%; right: 3%;">
            
        </div>
        <div style="float: right;position: relative;right: 3%;">
            <h2><?php if (!empty($_SESSION['login_user'])) {
                echo "$user";
            }
            else
            {
                echo "Guest User";
            } ?></h2>
        </div>

        <div style="float: right;position: relative;top: 15%;left: 1%;">
            
        </div>
    </div>

    <div id="header2">
        <div class="drop">
            <button class="menus">Main Menu</button>
            <div class="menu-content">
                <a href="account.php">Account</a>
                <a href="sendmoney.php">Send Money</a>
                <a href="requestmoney.php">Request Money</a>
                <a href="statement.php">Statements</a>
                <a href="searchtrans.php">Search Transactions</a>
                <a href="signout.php">Sign Out</a>
            </div>
        </div>

        <div class="drop">
            <button class="menus">Account Functions</button>
            <div class="menu-content">
                <a href="account.php">Modify personal details</a>
            </div>
        </div>

        <?php
            if (!empty($_SESSION['login_user']))
            {
                echo '<div style="float: right; ">
                    <a href="signout.php"><button class="signout">Sign
Out</button></a>
                </div>';
            }
        </div>
    </div>

```

```

    }

    else
    {
        echo '<div style="float: right;">
            <a href="register.html"><button
class="signout">Register</button></a>
            </div>

            <div style="float: right;">
                <a href="login.html.html"><button
class="signout">Sign In</button></a>
            </div>';
    }

    ?>
</div>
</div>

<div id="body" style="overflow-y: auto;">
    <br><br>
    <center>
        <form action="transaction.php?item=request" method="POST">
            <table cellpadding="15">
                <tr>
                    <td><b><span class="acctable">Requesting preson identifier<b
style="color: red;">*</b></span></b></td>
                    <td><b><span class="acctable">:</span></b></td>
                    <td><b><span class="acctable"><input class="input"
type="text" name="identifier" title="Give E-Mail or phone of person from whom you are asking for money"
required></span></b></td>
                </tr>
                <tr>
                    <td><b><span class="acctable">Amount<b style="color:
red;">*</b></span></b></td>
                    <td><b><span class="acctable">:</span></b></td>
                    <td><b><span class="acctable"><input class="input"
type="text" name="amount" title="Amount" required></span></b></td>
                </tr>
                <tr>
                    <td><b><span class="acctable">Memo</span></b></td>
                    <td><b><span class="acctable">:</span></b></td>
                    <td><b><span class="acctable"><textarea class="input"
name="memo" title="Optional description"></textarea></span></b></td>
                </tr>
                <tr>
                    <td> </td>

```

```

                </tr>

                <tr>
                    <td colspan="3"><center><b><span class="acctable"><input
type="submit" name="submit" value="Send Request" class="inp"> <input type="reset" name="reset"
value="Reset" class="inp"></span></b></center></td>
                </tr>
            </table>
        </form>
    </center>

</div>

</body>
</html>

```

### 3. Transaction.php

```

<?php

session_start();
if(!empty($_SESSION['login_user']))
{
    $user=$_SESSION['login_user'];
    $ssn=$_SESSION['utin'];
}

else
{
    header('Location: login.html');
}

?>

<!DOCTYPE html>
<html>
<head>
    <title>Transaction Page</title>
    <link rel="icon" type="image/png" href="icon1.png">
</head>
<body>
    <?php
        if (isset($_POST['submit']))
        {
            include("conf.php");

            $proc=$_GET['item'];

            if ($proc == 'send')
            {

```

```

$rtid=$_POST['identifier'];
$amount=$_POST['amount'];
$sacc=explode(",", $_POST['selacc']);
$bankid=$sacc[0];
$banumber=$sacc[1];
$memo=$_POST['memo'];
$timevar=date("Y-m-d H:i:s");
$checkbal="";

$query = "SELECT * FROM electronic_address WHERE identifier='$rtid' ";
$run = mysqli_query($con,$query) or die("ERROR:1 Resource not available....." . mysqli_error($con));

if ($run AND (mysqli_num_rows($run) > 0))
{

    if ( $_POST['selacc'] == 'tijnwal')
    {

        $query = "SELECT balance FROM user_account WHERE ssn='$ssn' ";
        $run = mysqli_query($con,$query) or die("ERROR:2 Resource not available....." . mysqli_error($con));

        if ($run AND (mysqli_num_rows($run) > 0))
        {
            while ($data = mysqli_fetch_assoc($run))
            {
                $checkbal=$data['balance'];
            }
        }

        if ($checkbal < $amount)
        {
            echo "<h1>ERROR: Transaction Unsuccessfull </h1>";
            sleep(1);
            mysqli_close($con);
            header("Location: error.html?var=transactionless");
        }

        $query = "INSERT INTO send_transaction (amount, datestamp, memo, cancelled, ssn, identifier)
VALUES ('$amount', '$timevar', '$memo', '0' , '$ssn', '$rtid') ";
        $run = mysqli_query($con,$query) or die("ERROR:2 Resource not available....." . mysqli_error($con));

        if ($run)
        {
            echo "<script type= 'text/javascript'>alert('Transaction Successfull'); </script>";
            mysqli_close($con);
            header("Location: sendmoney.php");
        }
    }
}

```

```

else
{
    echo "<h1>ERROR: Transaction Unsuccessfull </h1>";
    sleep(1);
    mysqli_close($con);
    header("Location: error.html?var=transactiona");
}
}

else
{
    $query = "INSERT INTO send_transaction (amount, datestamp, memo, cancelled, ssn, identifier)
VALUES ('$amount', '$timevar', '$memo', '0' , '$ssn', '$rtid'); ";
    $run = mysqli_query($con,$query) or die("ERROR:3 Resource not available....." . mysqli_error($con));

    $query = "UPDATE user_account SET balance=balance-'$amount' WHERE ssn='$ssn' ; ";
    $run = mysqli_query($con,$query) or die("ERROR:4 Resource not available....." . mysqli_error($con));
    $query = "UPDATE user_account SET user_account.balance=user_account.balance+'$amount' WHERE
ssn=(SELECT ssn FROM electronic_address WHERE identifier='$rtid') ; ";
    $run = mysqli_query($con,$query) or die("ERROR:4 Resource not available....." . mysqli_error($con));

    if ($run)
    {

        echo '<script type= "text/javascript">alert("Transaction Successfull"); </script>';
        sleep(2);
        mysqli_close($con);
        header("Location: sendmoney.php");
    }

    else
    {
        echo "<h1>ERROR: Transaction Unsuccessfull </h1>";
        sleep(1);
        mysqli_close($con);
        header("Location: error.html?var=transactiona");
    }
}

else
{
    echo "<h1>Runtime ERROR </h1>";
    sleep(1);
    mysqli_close($con);
    header("Location: error.html?var=transactionb");
}
}

```

```

elseif ($proc == 'request')
{
    $id=$_POST['identifier'];
    $amount=$_POST['amount'];
    $memo=$_POST['memo'];
    $timevar=date("Y-m-d H:i:s");
    $checkbal="";

    $query = "SELECT * FROM electronic_address WHERE identifier = '$id' ";
    $run = mysqli_query($con,$query) or die("ERROR:r1 Resource not available....." . mysqli_error($con));

    if ($run AND (mysqli_num_rows($run) > 0))
    {
        $query = "SELECT balance FROM user_account WHERE ssn=(SELECT ssn FROM electronic_address
WHERE identifier='$id') ";
        $run = mysqli_query($con,$query) or die("ERROR:2 Resource not available....." . mysqli_error($con));

        if ($run AND (mysqli_num_rows($run) > 0))
        {
            while ($data = mysqli_fetch_assoc($run))
            {
                $checkbal=$data['balance'];
            }
        }

        if ($checkbal < $amount)
        {
            echo "<h1>ERROR: Transaction Unsuccessfull </h1>";
            sleep(1);
            mysqli_close($con);
            header("Location: error.html?var=transactionless");
        }

        $query = "INSERT INTO request_transaction (amount, datestamp, memo, ssn,identifier) VALUES
('$amount', '$timevar', '$memo', '$ssn','$id')";
        $run = mysqli_query($con,$query) or die("ERROR:r2 Resource not available....." . mysqli_error($con));

        if ($run)
        {
            $rtid="";
            $query = "SELECT rtid FROM request_transaction WHERE ssn='$ssn' AND datestamp='$timevar' ";
            $run = mysqli_query($con,$query) or die("ERROR:r3 Resource not available....." . mysqli_error($con));

            if (mysqli_num_rows($run) > 0)
            {
                while($row = mysqli_fetch_assoc($run))
                {

```

```

        $rtid=$row["rtid"];
    }
}

else
{
    echo "no data found results";
    sleep(1);
    mysqli_close($con);
    header("Location: error.html?var=transactionreqa");
}

$query = "INSERT INTO rfrom (rtid, identifier, percentage) VALUES ('$rtid', '$id', '100');";
$run = mysqli_query($con,$query) or die("ERROR:r4 Resource not available....." . mysqli_error($con));

if ($run)
{
    $query = "UPDATE user_account SET balance=balance+'$amount' WHERE ssn='$ssn' ";
    $run = mysqli_query($con,$query) or die("ERROR:4 Resource not available....." . mysqli_error($con));

    $query = "UPDATE user_account SET balance=balance-'$amount' WHERE ssn=(SELECT ssn FROM
electronic_address WHERE identifier='$id') ";
    $run = mysqli_query($con,$query) or die("ERROR:4 Resource not available....." . mysqli_error($con));

    if ($run)
    {

        echo "<script type= 'text/javascript'>alert('Request Successfull'); </script>";
        mysqli_close($con);
        header("Location: requestmoney.php");
    }
}
else
{
    echo "<h1>Not able to complete request..... </h1>";
    sleep(1);
    mysqli_close($con);
    header("Location: error.html?var=transactionreqa");
}

echo "<script type= 'text/javascript'>alert('Request ticket Successfull'); </script>";
//mysqli_close($con);
header("Location: requestmoney.php");
}

else
{
    echo "<h1>Not able to generate ticket..... </h1>";
    sleep(1);

```



```

        mysqli_close($con);
        header("Location: error.html?var=transactionreqa");
    }

    echo "<script type= 'text/javascript'>alert('Request Successfull'); </script>";
    //mysqli_close($con);
    header("Location: requestmoney.php");
}

else
{
    echo "<h1>Request error </h1>";
    sleep(1);
    mysqli_close($con);
    header("Location: error.html?var=transactionreq");
}
}

else
{
    echo "Bad transaction request!";
    sleep(1);
    header("Location: error.html?var=transactionelse");
}

}

else
{
    echo "<h1> Retry..... </h1>";
    sleep(1);
    header("Location: error.html?var=transaction");
}

?>
</body>
</html>

```

#### 4. Account.php

```

<?php

session_start();
if(!empty($_SESSION['login_user']))
{
    $user=$_SESSION['login_user'];
    $ssn=$_SESSION['utin'];
}

else

```

```

    {
        header('Location: login.html');
    }

?>

<html>
<head>
    <title>Payment Network</title>

    <link rel="stylesheet" type="text/css" href="mainstyle.css">
    <link rel="icon" type="image/png" href="icon1.png">
</head>
<body>

    <div id="header">
        <div id="header1">
            <div style="float: left;position: relative;left: 3%; right: 3%;">
                
            </div>
            <div style="float: right;position: relative;right: 3%;">
                <h2><?php if (!empty($_SESSION['login_user'])) {
                    echo "$user";
                }
                else
                {
                    echo "Guest User";
                } ?></h2>
            </div>

            <div style="float: right;position: relative;top: 15%;left: 1%;">
                
            </div>
        </div>

        <div id="header2">
            <div class="drop">
                <button class="menus">Main Menu</button>
                <div class="menu-content">
                    <a href="account.php">Account</a>
                    <a href="sendmoney.php">Send Money</a>
                    <a href="requestmoney.php">Request Money</a>
                    <a href="statement.php">Statements</a>
                    <a href="searchtrans.php">Search Transactions</a>
                    <a href="signout.php">Sign Out</a>
                </div>
            </div>

            <div class="drop">
                <button class="menus">Account Functions</button>

```

```

        <div class="menu-content">
            <a href="account.php">Modify personal details</a>
        </div>
    </div>

    <?php
        if (!empty($_SESSION['login_user']))
        {
            echo '<div style="float: right;">
                <a href="signinout.php"><button class="signinout">Sign
Out</button></a>

                </div>';

        }

        else
        {
            echo '<div style="float: right;">
                <a href="register.html"><button
class="signinout">Register</button></a>

                </div>

                <div style="float: right;">
                    <a href="login.html.html"><button
class="signinout">Sign In</button></a>

                </div>';

        }

    ?>
</div>
</div>

    <?php
        include("conf.php");

        $query = "SELECT * FROM user_account WHERE ssn = '$ssn'";
        $run = mysqli_query($con,$query) or die("ERROR: Resource not available....." .
mysqli_error($con));
        $name="";
        $verify="";
        $pbankid="";
        $pbano="";
        if (mysqli_num_rows($run) > 0)
        {
            while($data = mysqli_fetch_assoc($run))
            {
                $name=$data["name"];
                $verify=$data['pbaverified'];
                $pbankid=$data['bankid'];

```

```

        $pbano=$data['banumber'];
    }
}

else
{
    echo "0 results";
}

$query = "SELECT identifier,type FROM electronic_address WHERE ssn = '$ssn'";
$run = mysqli_query($con,$query) or die("ERROR: Resource not available....." .
mysqli_error($con));
$email="";
$phone="";
if (mysqli_num_rows($run) > 0)
{
    while($data = mysqli_fetch_assoc($run))
    {

        if ($data["type"] == 'email')
        {
            $email=$data['identifier'];
        }

        else
        {
            $phone=$data['identifier'];
        }

    }
}

else
{
    echo "0 results";
}
?>

<div id="body">
    <div id="div1">
        <center>
            <br>
            
            <br>
            <h2><?php echo "$name";?></h2>
            <br><br><br>
            <a href="#personal_details" class="div1a">Personal Details</a>
            <br>
            <a href="#bank_details" class="div1a">Bank Details</a>

```

```

</center>

</div>

<div id="div2">
    <h1><a id="personal_details"><span style="color: red;">Personal
Details</span></a></h1>
    <br>
    <table cellpadding="10" width="50%">
        <tr>
            <td align="center"><b><span class="acctable">Name</span></b></td>
            <td><b><span class="acctable">:</span></b></td>
            <td><span class="acctable"><?php echo "$name"; ?></span></td>
            <td align="right"><a href="accountmod.php?item=name&value=<?php
echo($name) ?>">edit</a></td>
        </tr>
        <tr>
            <td align="center"><b><span
class="acctable">E-Mail</span></b></td>
            <td><b><span class="acctable">:</span></b></td>
            <td><span class="acctable"><?php echo "$email"; ?></span></td>
            <td align="right"><a href="accountmod.php?item=email&value=<?php
echo($email) ?>">edit</a></td>
        </tr>
        <tr>
            <td align="center"><b><span class="acctable">Phone</span></b></td>
            <td><b><span class="acctable">:</span></b></td>
            <td><span class="acctable"><?php echo "$phone"; ?></span></td>
            <td align="right"><a href="accountmod.php?item=phone&value=<?php
echo($phone) ?>">edit</a></td>
        </tr>
    </table>

    <h1><a id="bank_details"><span style="color: red;">Bank Details</span></a></h1>
    <br>
    <table cellpadding="10" width="100%">
        <tr>
            <td colspan="4" align="center"><b><span class="acctable"
style="font-size: 25;">Primary Account</span></b></td>
        </tr>
        <tr>
            <th><span class="acctable">Bank Id</span></th>
            <th><span class="acctable">Account Number</span></th>
            <th><span class="acctable">Status</span></th>
        </tr>
        <tr>

```

```

?></span></td>
?></span></td>

<td align="center"><span class="acctable"><?php echo "$pbankid";
echo '<span class="acctable"
style="color:green;">Verified</span>';

}

else
{
echo '<span style="color:
red;font-size:20;">Pending</span>';
}
?>
</td>
<td align="center"><a
href="accountmod.php?item=primaryacc&bank=<?php echo ($pbankid) ?>&acc=<?php echo ($pbano)
?>">edit</a></td>
</tr>
</table>
<br><br>

<?php
$query = "SELECT * FROM has_additional WHERE ssn = '$ssn'";
$run = mysqli_query($con,$query) or die("ERROR: Resource not available....." .
mysqli_error($con));
?>
<table cellpadding="10" width="100%">
<tr>
<td colspan="3" align="center"><b><span class="acctable"
style="font-size: 25;">Secondary Accounts</span></b></td>
</tr>
<tr>
<th><span class="acctable">Bank Id</span></th>
<th><span class="acctable">Account Number</span></th>
<th><span class="acctable">Status</span></th>
<th></th>
</tr>

<?php
$count=0;

if (mysqli_num_rows($run) > 0)
{
while($data = mysqli_fetch_assoc($run))
{

```

```

        $data1=$data['bankid'];
        $data2=$data['banumber'];
        $status=$data['verified'];
        if ($count == '0')
        {
            echo "<tr>";
            echo '<td align="center"><span
class="acctable">'. $data1. '</span></td>';

            echo '<td align="center"><span
class="acctable">'. $data2. '</span></td>';

            echo '<td align="center">';
            if ($status == '1')
            {
                echo '<span class="acctable"
style="color:green;">Verified</span>';

            }

            else
            {
                echo '<span style="color:
red;font-size:20;">Pending</span>';

            }
            echo "</td>";
            echo '<td align="center"><a
href="accountmod.php?item=secondaryacc&bank='. $data1. '&acc='. $data2. '">edit</a></td>';
            echo "</tr>";
            $count=1;
        }

        else
        {
            echo '<tr style="background-color: rgba(0, 0, 0, 0.1)">';
            echo '<td align="center"><span
class="acctable">'. $data1. '</span></td>';

            echo '<td align="center"><span
class="acctable">'. $data2. '</span></td>';

            echo '<td align="center">';
            if ($status == '1')
            {
                echo '<span class="acctable"
style="color:green;">Verified</span>';

            }

            else
            {
                echo '<span style="color:
red;font-size:20;">Pending</span>';

            }
            echo "</td>";

```

```

                                echo '<td align="center"><a
href="accountmod.php?item=secondaryacc&bank='.$data1.'&acc='.$data2.'">edit</a></td>';
                                echo "</tr>";
                                $count=0;
                                }

                                }
                                }
?>

<tr>
                                <td colspan="4"><center><a
href="accountmod.php?item=addsec"><button id="addbut"><b>Add</b></button></a></center></td>
                                </tr>

</table>

</div>
</div>
<?php mysqli_close($con);?>
</body>
</html>

```

## 5. Statement.php

```

<?php

session_start();
if(!empty($_SESSION['login_user']))
{
    $user=$_SESSION['login_user'];
    $ssn=$_SESSION['utin'];
}

else
{
    header('Location: login.html');
}

?>

<html>
<head>
    <title>Payment Network</title>

    <link rel="stylesheet" type="text/css" href="mainstyle.css">
    <link rel="icon" type="image/png" href="icon1.png">
</head>
<body>

```



```

<div id="header">
    <div id="header1">
        <div style="float: left;position: relative;left: 3%; right: 3%;">
            
        </div>
        <div style="float: right;position: relative;right: 3%;">
            <h2><?php if (!empty($_SESSION['login_user'])) {
                echo "$user";
            }
            else
            {
                echo "Guest User";
            } ?></h2>
        </div>

        <div style="float: right;position: relative;top: 15%;left: 9%;">
            
        </div>
    </div>

    <div id="header2">
        <div class="drop">
            <button class="menus">Main Menu</button>
            <div class="menu-content">
                <a href="account.php">Account</a>
                <a href="sendmoney.php">Send Money</a>
                <a href="requestmoney.php">Request Money</a>
                <a href="statement.php">Statements</a>
                <a href="searchtrans.php">Search Transactions</a>
                <a href="signout.php">Sign Out</a>
            </div>
        </div>

        <div class="drop">
            <button class="menus">Account Functions</button>
            <div class="menu-content">
                <a href="account.php">Modify personal details</a>
            </div>
        </div>

        <?php

            if (!empty($_SESSION['login_user']))
            {
                echo '<div style="float: right;">
                    <a href="signout.php"><button class="signout">Sign
Out</button></a>

                </div>';
            }

```

```

else
{
    echo '<div style="float: right;">
        <a href="register.html"><button
class="signout">Register</button></a>
        </div>

        <div style="float: right;">
            <a href="login.html.html"><button
class="signout">Sign In</button></a>
            </div>;
    }

?>
</div>
</div>

<?php
    include("conf.php");
?>

<div id="body">
    <div id="div1">
        <center>
            <br>
            <a href="#pending_request" class="div1a">Pending Request</a>
            <br>
            <a href="#statement" class="div1a">Statement</a>
        </center>
    </div>

    <div id="div2">
        <h1><a id="pending_request"><span style="color: red;">Pending
Request</span></a></h1>
        <br>
        <table cellpadding="10" width="100%">
            <th>
                <td align="center"><b><span class="acetable">Date</span></b></td>
                <td align="center"><b><span class="acetable">Person</span></b></td>
                <td align="center"><b><span
class="acetable">Description</span></b></td>
                <td align="center"><b><span
class="acetable">Amount</span></b></td>
                <td></td>
            </th>

            <?php

```

```

$phone=";
$mail=";
$sdebit=0;
$scredit=0;
$rmail=";
$balance=0;

$query = "SELECT * FROM user_account WHERE ssn = '$ssn'";
$run = mysqli_query($con,$query) or die("ERROR:s4 Resource not available....." .
mysqli_error($con));

if (mysqli_num_rows($run) > 0)
{
while($data = mysqli_fetch_assoc($run))
{
    $balance=$data["balance"];
}
}

$query = "SELECT * FROM electronic_address WHERE ssn = '$ssn'";
$run = mysqli_query($con,$query) or die("ERROR:s1 Resource not available....." .
mysqli_error($con));

if (mysqli_num_rows($run) > 0)
{
while($data = mysqli_fetch_assoc($run))
{
    if ($data['type'] == 'phone')
    {
        $phone=$data['identifier'];
    }

    else
    {
        $mail=$data['identifier'];
    }
}
}

$query = "SELECT * FROM request_transaction WHERE ssn = '$ssn' OR
identifier='$phone' OR identifier='$mail' ";
$run = mysqli_query($con,$query) or die("ERROR:s2 Resource not available....." .
mysqli_error($con));

if (mysqli_num_rows($run) > 0)
{
while($data = mysqli_fetch_assoc($run))
{
    $flag='not';
    echo "<tr>";

```

```

        echo '<td align="center"><span
class="acctable">'.$data["datestamp"].'</span></td>';
        echo '<td align="center"><span class="acctable">';

        if (($data["identifier"] == $phone) OR ($data["identifier"] == $mail))
        {
            $temp=$data["ssn"];

            $query2 = "SELECT * FROM electronic_address WHERE ssn =
'$temp' AND type='email' ";

            $run2 = mysqli_query($con,$query2) or die("ERROR:s3
Resource not available....." . mysqli_error($con));

            if (mysqli_num_rows($run2) > 0)
            {
                while($data2 = mysqli_fetch_assoc($run2))
                {
                    $rmail=$data2["identifier"];
                }
            }
            $flag='cr';
            echo $rmail;

        }

        else
        {

            $flag='deb';
            echo $data['identifier'];
        }
        echo '</span></td>';
        echo '<td align="center"><span
class="acctable">'.$data["memo"].'</span></td>';

        if ($flag == 'cr')
        {
            echo "<td> </td>";
            echo '<td align="center"><span
class="acctable">'.$data["amount"].'</span></td>';
            $credit=$credit+$data["amount"];
        }
        else if ($flag == 'deb')
        {

            echo '<td align="center"><span
class="acctable">'.$data["amount"].'</span></td>';
            echo "<td> </td>";
            $debit=$debit+$data["amount"];
        }
    }

```

```

        else
        {

        }

        echo "</tr>";
    }

}
echo "</table>";

?>
</table>

<h1><a id="statement"><span style="color: red;">Statement</span></a></h1>
<br>
<table cellpadding="10" width="100%" >
    <tr>
        <th align="center"><b><span class="acctable">Date</span></b></th>
        <th align="center"><b><span
class="acctable">To/From</span></b></th>
        <th align="center"><b><span
class="acctable">Description</span></b></th>
        <th align="center"><b><span class="acctable">Debit</span></b></th>
        <th align="center"><b><span class="acctable">Credit</span></b></th>
    </tr>

    <?php
    $phone="";
    $mail="";
    $debit=0;
    $credit=0;
    $rmail="";
    $balance=0;

    $query = "SELECT * FROM user_account WHERE ssn = '$ssn'";
    $run = mysqli_query($con,$query) or die("ERROR:s4 Resource not available....." .
mysqli_error($con));

    if (mysqli_num_rows($run) > 0)
    {
        while($data = mysqli_fetch_assoc($run))
        {
            $balance=$data["balance"];
        }
    }

```

```

$query = "SELECT * FROM electronic_address WHERE ssn = '$ssn'";
$run = mysqli_query($con,$query) or die("ERROR:s1 Resource not available....." .
mysqli_error($con));

if (mysqli_num_rows($run) > 0)
{
    while($data = mysqli_fetch_assoc($run))
    {
        if ($data['type'] == 'phone')
        {
            $phone=$data['identifier'];
        }

        else
        {
            $mail=$data['identifier'];
        }
    }
}

$query = "SELECT * FROM send_transaction WHERE ssn = '$ssn' OR
identifier='$phone' OR identifier='$mail' ";
$run = mysqli_query($con,$query) or die("ERROR:s2 Resource not available....." .
mysqli_error($con));

if (mysqli_num_rows($run) > 0)
{
    while($data = mysqli_fetch_assoc($run))
    {
        $flag='not';
        echo "<tr>";
        echo '<td align="center"><span
class="acctable">'.$data["datestamp"].'</span></td>';
        echo '<td align="center"><span class="acctable">';

        if (($data["identifier"] == $phone) OR ($data["identifier"] == $mail))
        {
            $temp=$data["ssn"];

            $query2 = "SELECT * FROM electronic_address WHERE ssn =
'$temp' AND type='email' ";
            $run2 = mysqli_query($con,$query2) or die("ERROR:s3
Resource not available....." . mysqli_error($con));

            if (mysqli_num_rows($run2) > 0)
            {
                while($data2 = mysqli_fetch_assoc($run2))
                {
                    $rmail=$data2["identifier"];
                }
            }
        }
    }
}

```

```

        }
        $flag='cr';
        echo $rmail;

    }

    else
    {

        $flag='deb';
        echo $data['identifier'];

    }
    echo '</span></td>';
    echo '<td align="center"><span
class="acctable">'.$data["memo"].'</span></td>';

    if ($flag == 'cr')
    {
        echo "<td> </td>";
        echo '<td align="center"><span
class="acctable">'.$data["amount"].'</span></td>';
        $credit=$credit+$data["amount"];
    }
    else if ($flag == 'deb')
    {

        echo '<td align="center"><span
class="acctable">'.$data["amount"].'</span></td>';
        echo "<td> </td>";
        $debit=$debit+$data["amount"];
    }
    else
    {

    }

    echo "</tr>";

    }
}
echo "</table>";
?>
</table>

</div>
</div>
<?php mysqli_close($con);?>
</body>
</html>

```

## HTML file samples:

### 1. login.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Login</title>
    <style>
        .inp
        {
            cursor: pointer;
            padding: 10px;
            font-size: 18px;
            text-align: center;
            background-color: lightblue;

        }

        .inp:hover
        {
            background-color: lightgreen;
        }

        a
        {
            text-decoration: none;
        }

        body
        {
            background : linear-gradient( rgba(255, 255, 255, 0.2), rgba(255, 255, 255, 0.3) ),
url('home1.jpg');;
            background-repeat: no-repeat;
            background-size: cover;
            background-attachment: fixed;
        }

    </style>
    <link rel="icon" type="image/png" href="icon1.png">
</head>
<body>
    <br><br><br><br><br><br><br><br>
    <center>
        <form action="login.php" method="POST">
            <fieldset style="width: 80%; background-color: rgba(255, 255, 255,
0.8);"><legend><b><span style="font-size: 36px; color:black;">Enter your LOGIN
credentials</span></b></legend>
                <table cellpadding="5">
                    <tr>
                        <td>
```



```

                                <h2>Username</h2>
                                </td>
                                <td><b>:</b></td>
                                <td><input type="text" name="uname" title="Enter
username"></td>
                                </tr>

                                <tr>
                                <td>
                                <h2>Password</h2>
                                </td>
                                <td><b>:</b></td>
                                <td>
                                <input type="Password" name="pass" title="Enter
Password">
                                </td>
                                </tr>

                                <tr>
                                <td colspan="3"><center><input type="submit" name="submit"
value="Login" class="inp"> <input type="reset" value="Reset" class="inp"></center></td>
                                </tr>
                                </table>
                                </fieldset>
                                </form>
                                <h1><b>OR</b></h1>
                                <fieldset style="width: 30%; border-color: rgba(0, 0, 0, 0.2);background-color: rgba(255,
255, 255, 0.8);">
                                <h1><a href="register.html">Create an account</a></h1>
                                </fieldset>
                                </center>
                                </body>
                                </html>

```

## 2. Register.html

```

<!DOCTYPE html>
<html>
<head>
    <title>User Registration</title>
    <style>
        body
        {
            background : linear-gradient( rgba(255, 255, 255, 0.2), rgba(255, 255, 255, 0.3) ),
            url('home1.jpg');;
            background-repeat: no-repeat;
            background-size: cover;
            background-attachment: fixed;
        }
    </style>

```

```

        .input
        {
            width: 140%;
            padding: 5;
        }

        .inp
        {
            cursor: pointer;
            padding: 10px;
            font-size: 18px;
            text-align: center;
            background-color: lightblue;
        }

        .inp:hover
        {
            background-color: lightgreen;
        }

</style>
<link rel="icon" type="image/png" href="icon1.png">
</head>
<body>
    <br><br><br><br>
    <center>
        <form action="register.php" method="post">
            <fieldset style="width: 50%; background-color: rgba(255, 255, 255, 0.8);">
                <legend><b><span style="font-size: 35px; color: black;">Fill login
details</span></b></legend>
                <table align="left" cellpadding="2">
                    <tr>
                        <td><h2>Username<b style="color: red;">*</b></h2></td>
                        <td><b>:</b></td>
                        <td><input class="input" type="text" name="username"
title="Give username: It can include [a-z,A-z,0-9] but start with character" required></td>
                    </tr>

                    <tr>
                        <td><h2>Password<b style="color: red;">*</b></h2></td>
                        <td><b>:</b></td>
                        <td><input class="input" type="password" name="password"
title="Give strong password" required></td>
                    </tr>
                </table>
            </fieldset>

            <fieldset style="width: 50%; background-color: rgba(255, 255, 255, 0.8);">

```

```

<legend><b><span style="font-size: 35px; color: black;">Personal
Details</span></b></legend>
<table align="left" cellpadding="2">
  <tr>
    <td><h2>SSN<b style="color: red;">*</b></h2></td>
    <td><b>:</b></td>
    <td><input class="input" type="password" name="ssn"
title="Give social security number: Government issued 9 digit TIN number" required></td>
  </tr>

  <tr>
    <td><h2>Name<b style="color: red;">*</b></h2></td>
    <td><b>:</b></td>
    <td><input class="input" type="text" name="name" title="Give
your name" required></td>
  </tr>

  <tr>
    <td><h2>E-Mail Id<b style="color: red;">*</b></h2></td>
    <td><b>:</b></td>
    <td><input class="input" type="text" name="email" title="Give
your email" required></td>
  </tr>

  <tr>
    <td><h2>Phone No</h2></td>
    <td><b>:</b></td>
    <td><input class="input" type="text" name="phone" title="Give
your phone number" required></td>
  </tr>
</table>
</fieldset>

<fieldset style="width: 50%; background-color: rgba(255, 255, 255, 0.8);">
  <legend><b><span style="font-size: 35px; color: black;">Primary Bank
accounts details</span></b></legend>
  <table align="left" cellpadding="2">
    <tr>
      <td><h2>Bank Id<b style="color: red;">*</b></h2></td>
      <td><b>:</b></td>
      <td><input class="input" type="text" name="bankid"
title="Provide with id given to you by bank" placeholder="DO NOT ENTER WRONG NUMBER"
required></td>
    </tr>

    <tr>
      <td><h2>Account Number<b style="color:
red;">*</b></h2></td>
      <td><b>:</b></td>

```

```

<td><input class="input" type="text" name="account"
title="Give your bank account number" placeholder="DO NOT ENTER WRONG NUMBER" required></td>
</tr>

</table>

</fieldset>

<fieldset style="width: 50%; background-color: rgba(255, 255, 255, 0.8);">
<table cellpadding="2" >
<tr>
<td colspan="2"><input type="submit" name="submit"
value="Register" class="inp"> <input type="reset" value="Reset" class="inp"></td>
</tr>
</table>
</fieldset>

</form>
</center>
</body>
</html>

```

## Database, DB Structure and DB Instances :

The screenshot shows a VMware Workstation 15 Player running an Ubuntu 64-bit VM. Inside the VM, a Firefox browser is open to the phpMyAdmin interface. The interface shows the 'cs631' database selected, and the 'account\_modification' table is being viewed. The table structure is as follows:

name	ssn	email	phone	primaryacc	secondaryacc	addsec	secondaryemail
Ben Stokes	99890000	ben@gm	10010110	10010101	NULL	ben@gm	
Andrew	99890010	andw@gm	10010110	10010101	NULL	andrew@g	

The interface also shows options for filtering, sorting, and exporting the data. The bottom of the screen shows the Windows taskbar with the time 2:49 AM on 5/7/2020.

Ubuntu 64-bit - VMware Workstation 15 Player (Non-commercial use only)

Player

Firefox Web Browser

localhost / localhost / cs01 / bank\_account | phpMyAdmin 5.0.2 - Mozilla Firefox

localhost/phpmyadmin/sql.php?server=1&db=cs01&table=bank\_account&query=

phpMyAdmin

Recent Favorites

- New
- cs631
- New
- account\_modification
- bank\_account
- electronic\_address
- email
- has\_additional
- login
- phone
- request\_transaction
- send\_transaction
- from
- user\_account
- information\_schema
- mysql
- performance\_schema
- phpmyadmin
- test

Database: cs631 Table: bank\_account

Showing rows 0 - 2 (3 total, Query took 0.0012 seconds.)

SELECT \* FROM 'bank\_account'

Options

bankid banumber

bankid	banumber
AmExp01	10010110
Chase01	10001001
Chase02	10010101

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: Let every user access this bookmark

Bookmark this SQL query

Ubuntu 64-bit - VMware Workstation 15 Player (Non-commercial use only)

Player

Firefox Web Browser

localhost / localhost / cs01 / electronic\_address | phpMyAdmin 5.0.2 - Mozilla Firefox

localhost/phpmyadmin/sql.php?server=1&db=cs01&table=electronic\_address&query=

phpMyAdmin

Recent Favorites

- New
- cs631
- New
- account\_modification
- bank\_account
- electronic\_address
- email
- has\_additional
- login
- phone
- request\_transaction
- send\_transaction
- from
- user\_account
- information\_schema
- mysql
- performance\_schema
- phpmyadmin
- test

Database: cs631 Table: electronic\_address

Showing rows 0 - 14 (15 total, Query took 0.0033 seconds.)

SELECT \* FROM 'electronic\_address'

Options

identifier	ssn	type	verified
91191191	1234567890	phone	1
9343899	123456789	phone	1
97343891	99890100	phone	1
97343892	99890000	phone	1
97343893	99890010	phone	1
97343894	99890011	phone	1
97343895	99890001	phone	1
adam@gig.cm	99890001	email	1
and@gig.cm	99890010	email	1
ben@gig.cm	99890000	email	1
beck@gig.cm	123456789	email	1
john@gig.cm	99890001	email	1
joy@gig.cm	88888888	email	1
rafe@gig.cm	99890100	email	1
san@gig.cm	1234567890	email	1

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: Let every user access this bookmark

Bookmark this SQL query

Ubuntu 64-bit - VMware Workstation 15 Player (Non-commercial use only)

Player

Activities

Firefox Web Browser

localhost / localhost / +

localhost / localhost / cs01 / email | phpMyAdmin 5.0.2 - Mozilla Firefox

phpMyAdmin

Recent Favorites

- New
- cs01
- New
- account\_modification
- bank\_account
- electronic\_address
- email
- has\_additional
- login
- phone
- request\_transaction
- from
- send\_transaction
- user\_account
- information\_schema
- mysql
- performance\_schema
- phpmyadmin
- test

Columns

- New
- email (PK, varchar)
- ssn (MUL, int)
- indexes

Query results

Showing rows 0 - 5 (6 total, Query took 0.0021 seconds)

SELECT \* FROM 'email'

Options

Number of rows: 25 Filter rows: Search this table Sort by key: None

ssn	email
99890000	ben@gm.cm
99890001	john@gm.cm
99890010	and@gm.cm
99890011	adam@gm.cm
99890100	rafe@gm.cm
1234567890	sang@gm.cm

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: Let every user access this bookmark

Bookmark this SQL query

Type here to search

2:50 AM 5/7/2020

Ubuntu 64-bit - VMware Workstation 15 Player (Non-commercial use only)

Player

Activities

Firefox Web Browser

localhost / localhost / +

localhost / localhost / cs01 / has\_additional | phpMyAdmin 5.0.2 - Mozilla Firefox

phpMyAdmin

Recent Favorites

- New
- cs01
- New
- account\_modification
- bank\_account
- electronic\_address
- email
- has\_additional
- login
- phone
- request\_transaction
- from
- send\_transaction
- user\_account
- information\_schema
- mysql
- performance\_schema
- phpmyadmin
- test

Columns

- New
- bankid (PK, varchar)
- banumber (PK, int)
- ssn (PK, int)
- indexes

Query results

Showing rows 0 - 1 (2 total, Query took 0.0038 seconds)

SELECT \* FROM 'has\_additional'

Options

Number of rows: 25 Filter rows: Search this table Sort by key: None

ssn	bankid	banumber
99890001	AmExp01	10010110
99890010	Chase02	10010101

Query results operations

Print Copy to clipboard Export Display chart Create view

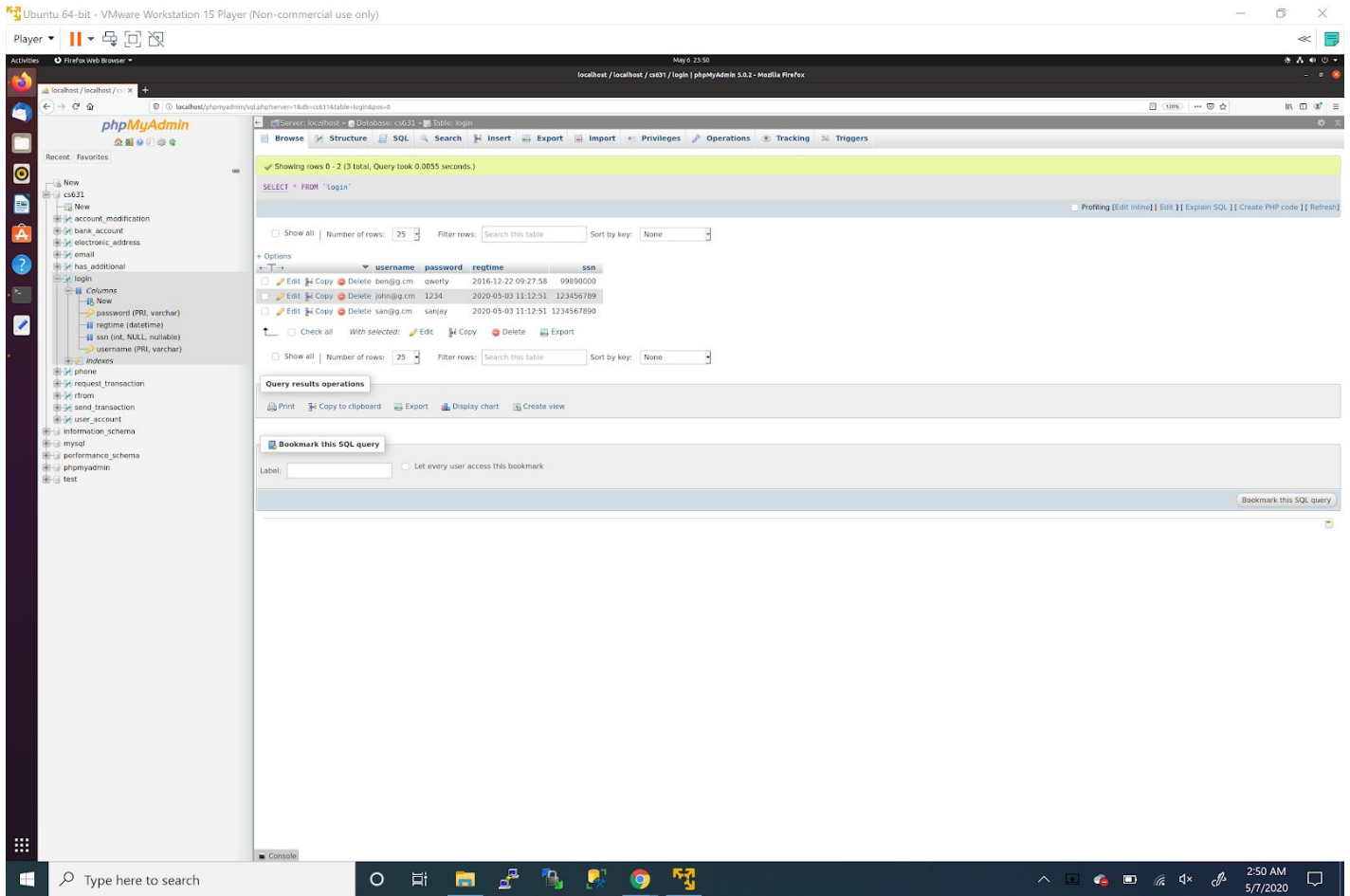
Bookmark this SQL query

Label: Let every user access this bookmark

Bookmark this SQL query

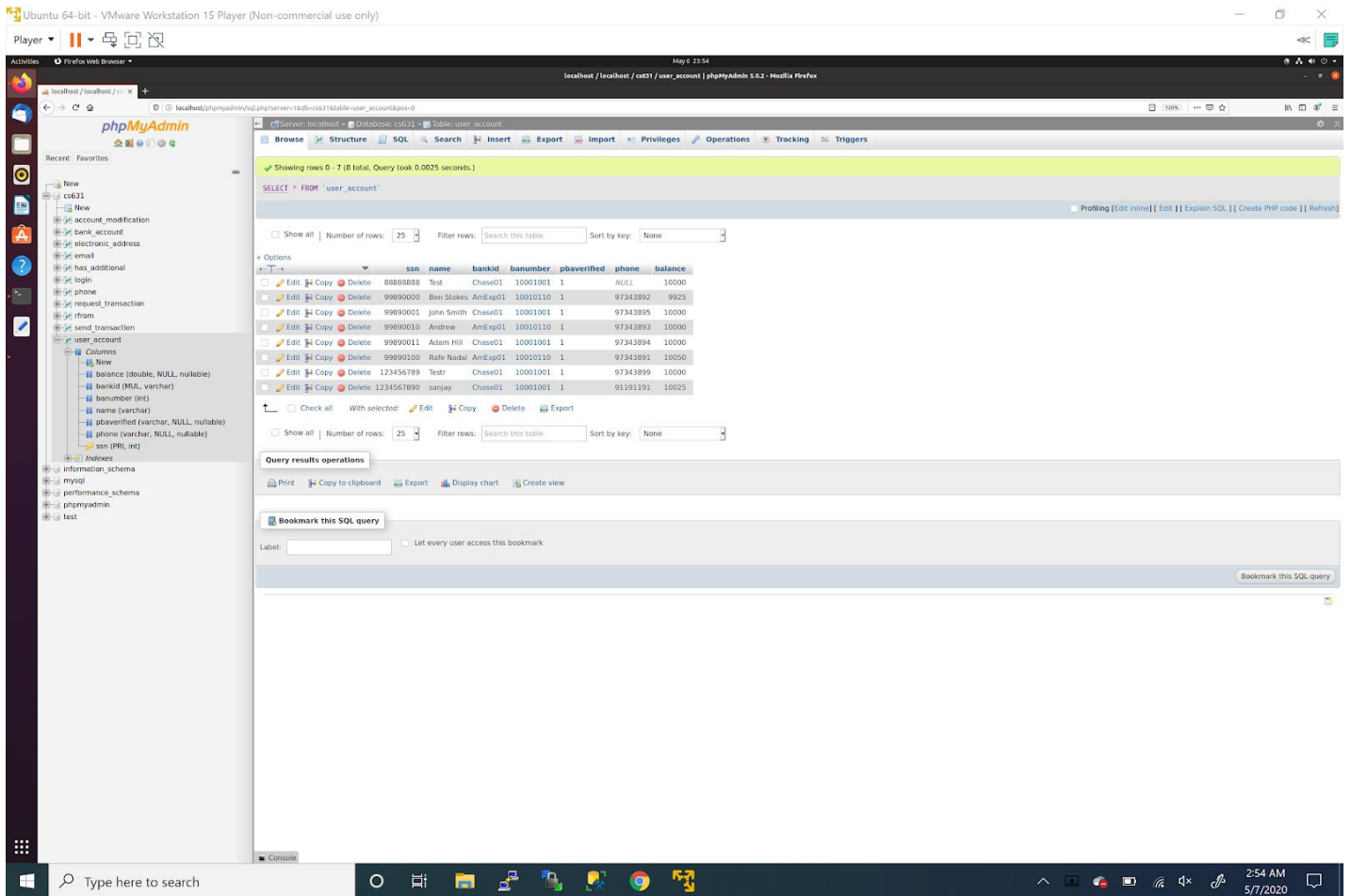
Type here to search

2:50 AM 5/7/2020









## Difficulties faced:

- Oftentimes we came up with a design but had to scramble it in order to achieve the optimum solution.
- The relationships between entity types was difficult to determine.
- Making the referential constraints was a difficult task as some amount of assumptions had to be made without straying away from the original plan.
- Adding constraints was difficult
- Adding instances with chicken and egg problems was challenging.
- Implementing the front-end using HTML was beyond our comfort-zone.