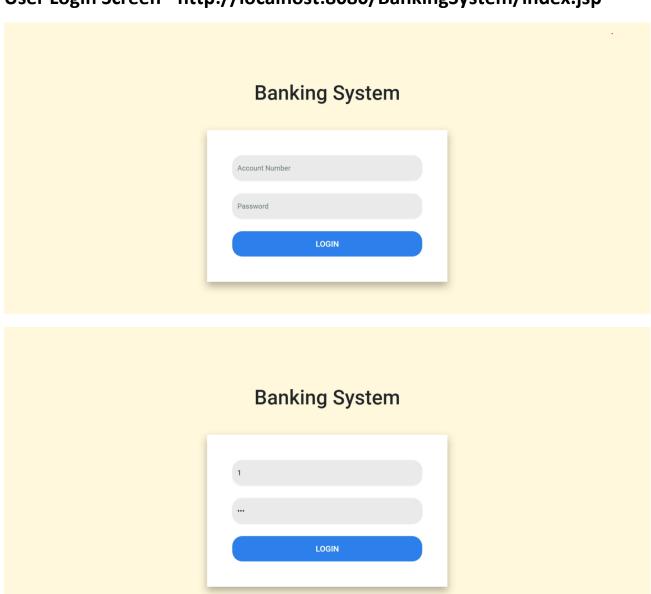
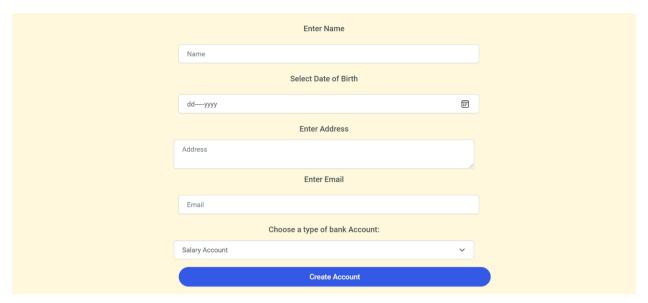
Project 1
User Login Screen - http://localhost:8080/BankingSystem/index.jsp

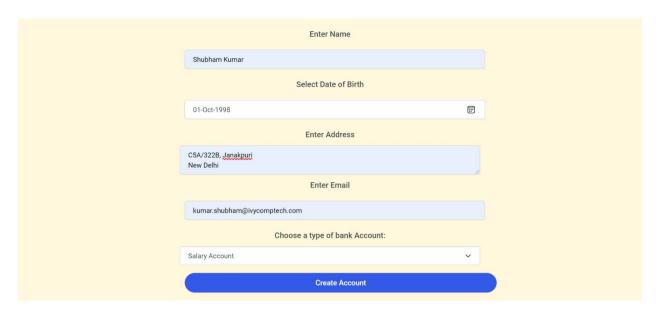


Main Menu Display - (http://localhost:8080/BankingSystem/LoginCheck)

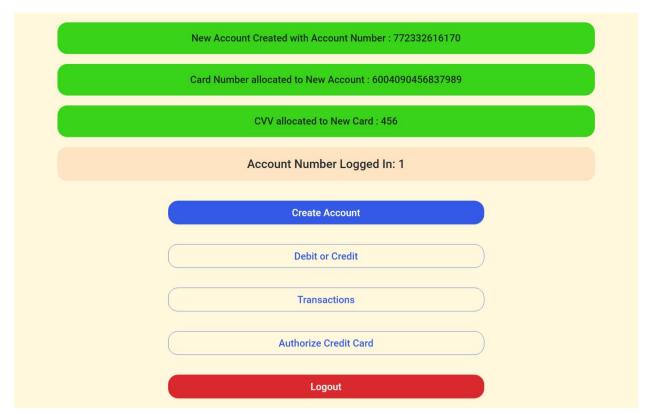


Creating Account – (http://localhost:8080/BankingSystem/createAccount.jsp?)





Account Created – (http://localhost:8080/BankingSystem/LoginCheck)



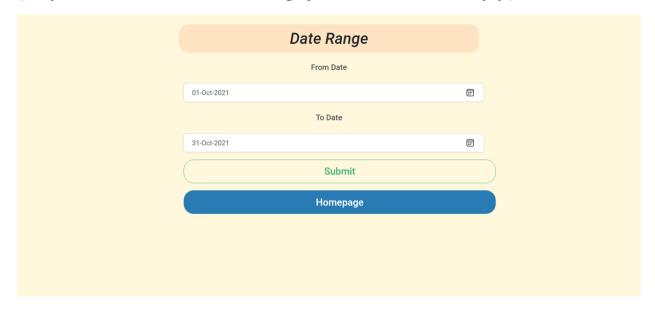
Debit or Credit Transaction – (http://localhost:8080/BankingSystem/debitOrCredit.jsp)

Make a Transaction
Enter Beneficiary Account Number
Beneficiary Account Number
Enter Amount
0
Enter Description
Description
Enter Cheque Number
Cheque No.
Debit From
Credit To
Нотераде
Make a Transaction
Transaction Successfull!
Enter Beneficiary Account Number
557238349934
Enter Amount
12345
Enter Description
Debit From
Enter Cheque Number
Cheque No.
Debit From
Credit To

Error Display – (http://localhost:8080/BankingSystem/debitOrCredit.jsp)

Make a Transaction
Account Number and Amount can't be empty!
Enter Beneficiary Account Number
Beneficiary Account Number
Enter Amount
0
Enter Description
Description
Enter Cheque Number
Cheque No.
Debit From .
Credit To
Нотераде
Make a Transaction
Enter Valid Account Number!
Enter Beneficiary Account Number
Beneficiary Account Number
Enter Amount
Enter Amount 0
0
0 Enter Description
Enter Description Description
Enter Description Description Enter Cheque Number
Description Enter Cheque Number Cheque No.

Transaction between Dates – (http://localhost:8080/BankingSystem/transactions.jsp)



(http://localhost:8080/BankingSystem/transactionsTable.jsp)

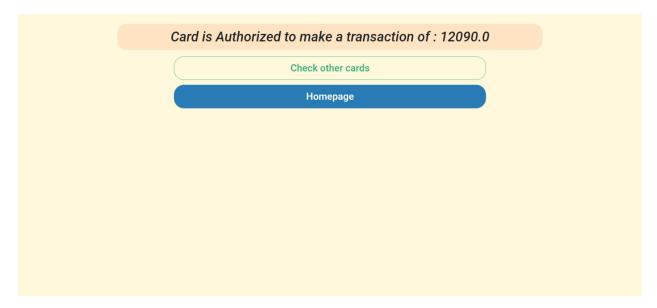
SL. NO.	ACCOUNT NUMBER	BENEFICIARY ACCOUNT NO.	DATE	DESCRIPTION	CHEQUE NO.	WITHDRAW	DEPOSIT	AVAILABLE BALANC
1	1	56483765809	2021-10-30			0.0	3.1241321E7	-2.5459799E7
2	1	56483765809	2021-10-30			1321.0	0.0	-2.5458478E7
3	1	56483765809	2021-10-30			0.0	7.531312313E9	-7.556770791E9
4	1	56483765809	2021-10-30			32432.0	0.0	6607271.0
5	1	56483765809	2021-10-30			42432.0	0.0	6617271.0
6	1	56483765809	2021-10-30			31321.0	0.0	6606160.0
7	1	56483765809	2021-10-30			0.0	31321.0	6543518.0
8	1	96626266159	2021-10-30			0.0	313213.0	6261626.0
9	1	96626266159	2021-10-30			213213.0	0.0	6788052.0
10	1	557238349934	2021-10-30			0.0	132.0	6574707.0
11	1	557238349933	2021-10-30			0.0	123.0	6574716.0
12	1	557238349933	2021-10-30			0.0	21213.0	6553626.0
13	1	557238349934	2021-10-30			0.0	3213.0	6571626.0
14	1	557238349933	2021-10-30			0.0	121.0	6574718.0
15	1	557238349933	2021-10-30			123.0	0.0	6574962.0
16	î.	557238349933	2021-10-30			123.0	0.0	6574962.0
17	1	557238349933	2021-10-30			0.0	123.0	6574716.0
18	1	557238349934	2021-10-30			7987.0	0.0	6582703.0
19	1	557238349934	2021-10-30			3213.0	0.0	6585916.0
20	1	557238349933	2021-10-30			0.0	132.0	6585784.0
21	1	56483765809	2021-10-30			0.0	3131.0	6582653.0
22	1	96626266159	2021-10-30			123323.0	0.0	6705976.0
23	1	96626266159	2021-10-30			123.0	0.0	6706099.0
24	1	96626266159	2021-10-30			123.0	0.0	6706222.0
25	1	96626266159	2021-10-30	132		232.0	0.0	6706454.0
26	1	557238349934	2021-10-30			0.0	57.0	6706397.0
27	1	557238349934	2021-10-30			3245.0	0.0	6709642.0
28	1	557238349934	2021-10-30			12345.0	0.0	6721987.0
29	ï	557238349934	2021-10-30	Debit From		0.0	12345.0	6709642.0
				Go Back				
				GO Dack				

Authorize Credit Card -

(http://localhost:8080/BankingSystem/authorizeCreditCard.jsp)

Authorize Credit Card
Enter Name
Name
Enter Card Number
Credit Card Number
Enter CVV/CVV2
CVV
Amount
0
Authorize
Homepage

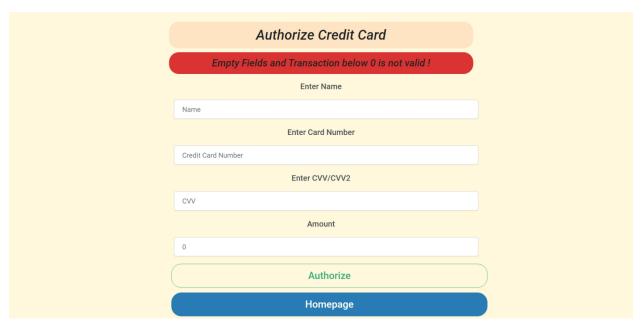
Card Authorization Successful – (http://localhost:8080/BankingSystem/Authorize)

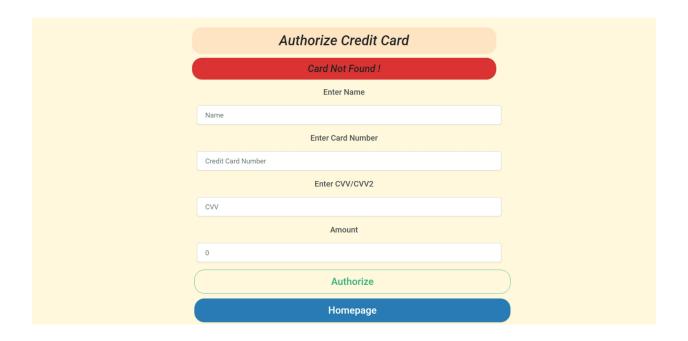


Card Authorization Failed – (http://localhost:8080/BankingSystem/Authorize)

Card is not Authorized to make a transaction of : 1222222.0	
Please Check card details or transaction limit as it is less than 100000.	
Check Again	
Homepage	

Error Handling Display – (http://localhost:8080/BankingSystem/authorizeCreditCard.jsp)





Code:

Styles.css

```
* {
 margin: 0;
 padding: 0;
 box-sizing: border-box;
}
body {
  min-height: 100vh;
 background-color: cornsilk;
  display: flex;
  font-family: "Roboto";
.container {
  margin: auto;
 width: 500px;
 max-width: 90%;
.container h1 {
 text-align: center;
  margin: 50px;
 font-family: "Roboto";
}
.container form {
 width: 100%;
 height: 100%;
  padding: 20px;
  background: white;
  border-radius: 1px;
```

```
box-shadow: 0 8px 16px rqba(0, 0, 0, 0.3);
 padding-top: 50px;
 padding-right: 50px;
 padding-left: 50px;
 padding-bottom: 50px;
.container form .form-control {
 width: 100%;
 height: 50px;
 color: black;
 background: #eaeaea;
 border-radius: 1px;
 border: 0px solid rgb(2, 93, 153);
 margin: 0px 0 25px 0;
 padding: 0 10px;
 font-family: "Roboto";
 border-radius: 20px;
}
.container form .btn {
 margin-left: 50%;
 transform: translateX(-50%);
 width: 100%;
 height: 50px;
 border: none;
 outline: none;
 background: #2d80ec;
 cursor: pointer;
 font-size: 16px;
 text-transform: uppercase;
 color: white;
 border-radius: 1px;
 transition: 0.3s;
 font-family: "Roboto";
 border-radius: 20px;
.container form .btn:hover {
 opacity: 0.7;
.h1 {
 text-align: center;
 margin-bottom: 24px;
 margin: auto;
 color: #222;
 font-family: "Roboto";
::placeholder {
 color: #b8b8b8;
 opacity: 1;
}
.center {
 display: block;
 margin-left: auto;
 margin-right: auto;
}
```

```
.homepage {
 text-align: center;
 width: 90vw;
}
.homepage .btn {
 width: 50vw;
 margin: 20px;
 font-size: 20px;
 border-radius: 20px;
}
.homepage h4 {
 background-color: bisque;
 border-radius: 20px;
 padding: 20px;
 margin: 20px;
}
.homepage h5 {
 background-color: rgb(57, 211, 26);
 border-radius: 20px;
 padding: 20px;
 margin: 20px;
}
.create {
 text-align: center;
 width: 50vw;
 align-items: center;
 justify-content: center;
 margin-top: 10px;
.create label {
 margin: 10px;
}
.create input {
 margin: 10px;
.create .btn {
 width: 50vw;
 margin: 10px;
 margin-top: 0%;
 font-size: 15px;
 border-radius: 20px;
}
.dbcd {
 text-align: center;
 width: 50vw;
 align-items: center;
 justify-content: center;
```

```
margin-top: 10px;
.dbcd h2 {
  font-style: italic;
  background-color: bisque;
  padding: 5px;
  border-radius: 20px;
}
.dbcd label {
 margin: 5px;
.dbcd input {
  margin: 5px;
.dbcd textarea {
  margin: 5px;
.dbcd .btn {
 width: 45vw;
  margin: 10px;
 margin-top: 5px;
  font-size: 12px;
  border-radius: 20px;
}
.dbcd h5 {
  font-style: italic;
  background-color: rgb(219, 51, 51);
  padding: 10px;
  border-radius: 20px;
}
.transactions {
  text-align: center;
 width: 50vw;
  align-items: center;
  justify-content: center;
  margin-top: 20px;
.transactions h2 {
  font-style: italic;
  background-color: bisque;
  padding: 10px;
  border-radius: 20px;
.transactions input {
  margin: 10px;
}
```

```
.transactions label {
 margin: 10px;
.transactions .btn {
 width: 50vw;
 margin: 10px;
 margin-top: 5px;
 font-size: 20px;
 border-radius: 20px;
}
.tr-table {
 text-align: center;
 width: 100vw;
 align-items: center;
 justify-content: center;
 margin-top: 10px;
.tr-table h3 {
 font-style: italic;
 background-color: bisque;
 padding: 10px;
 border-radius: 20px;
}
.tr-table .btn {
 width: 90vw;
 margin: 10px;
 margin-top: 5px;
 font-size: 20px;
 border-radius: 20px;
}
.authorize {
 text-align: center;
 width: 50vw;
 align-items: center;
 justify-content: center;
 margin-top: 20px;
.authorize input {
 margin: 10px;
.authorize label {
 margin: 5px;
.authorize .btn {
 width: 50vw;
 margin: 5px;
```

```
margin-top: 5px;
 font-size: 20px;
 border-radius: 20px;
}
.authorize h3 {
 font-style: italic;
 background-color: bisque;
 padding: 10px;
 border-radius: 20px;
}
.authorize h5 {
 font-style: italic;
 background-color: rgb(219, 51, 51);
 padding: 10px;
 border-radius: 20px;
}
.authorized {
 text-align: center;
 width: 70vw;
 align-items: center;
 justify-content: center;
 margin-top: 20px;
}
.authorized .btn {
 width: 50vw;
 margin: 5px;
 margin-top: 5px;
 font-size: 20px;
 border-radius: 20px;
}
.authorized h3 {
 font-style: italic;
 background-color: bisque;
 padding: 10px;
 border-radius: 20px;
}
.unauthorized {
 text-align: center;
 width: 70vw;
 align-items: center;
 justify-content: center;
 margin-top: 20px;
.unauthorized .btn {
 width: 50vw;
 margin: 5px;
 margin-top: 5px;
 font-size: 20px;
```

```
border-radius: 20px;
}
.unauthorized h3 {
  font-style: italic;
  background-color: bisque;
  padding: 10px;
  border-radius: 20px;
}
```

index.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"</pre>
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
  <head>
    <title>Banking System</title>
    <meta charset="windows-1252" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
    <link rel="stylesheet" href="styles.css" type="text/css" />
  </head>
  <body>
    <div class="container-fluid container">
      <h1>Banking System</h1>
      <%session.invalidate(); %>
      <form action="LoginCheck" method="post">
        <div class="form-group">
          <input</pre>
            type="number"
            class="form-control"
            name="accountNumber"
            placeholder="Account Number"
          />
        </div>
        <div class="form-group">
          <input</pre>
            type="password"
            class="form-control"
            name="password"
            placeholder="Password"
          />
        </div>
        <input type="submit" class="btn" value="Login" />
      </form>
    </div>
  </body>
</html>
```

debitOrCredit.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"</pre>
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
  <head>
    <meta charset="ISO-8859-1" />
    <title>Debit or Credit Amount</title>
    <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>
    <div class="container-fluid dbcd">
      <h2>Make a Transaction</h2>
      <% String message = ""; if(!(request.getSession().getAttribute("message")</pre>
      == null)){ message =
      request.getSession().getAttribute("message").toString(); }
      if(!message.isEmpty()){ %>
      <h5><%= message %></h5>
      <%}%>
      <form action="DebitCredit" method="post">
        <div class="form-group">
          <label class="form-label" for="beneficiaryAccountNumber"</pre>
            >Enter Beneficiary Account Number</label
          <input</pre>
            type="number"
            class="form-control"
            id="beneficiaryAccountNumber"
            name="beneficiaryAccountNumber"
            placeholder="Beneficiary Account Number"
          />
        </div>
        <div class="form-group">
          <label class="form-label" for="amount">Enter Amount</label>
          <input</pre>
            id="amount"
            type="number"
            class="form-control"
            name="amount"
            placeholder="Amount"
            value="0"
          />
        </div>
        <div class="form-group">
          <label class="form-label" for="description">Enter Description</label>
          <textarea
            id="description"
            class="form-control"
            name="description"
            placeholder="Description"
          ></textarea>
        </div>
```

```
<div class="form-group">
          <label class="form-label" for="chequeNo">Enter Cheque Number</label>
          <input</pre>
            id="chequeNo"
            type="text"
            class="form-control"
            name="chequeNo"
            placeholder="Cheque No."
            value=""
          />
        </div>
        <input</pre>
          type="submit"
          class="btn btn-outline-success"
          name="submitButton"
          value="Debit From"
        />
        <input</pre>
          type="submit"
          class="btn btn-outline-danger"
          name="submitButton"
          value="Credit To"
        />
      </form>
      <form action="homepage.jsp">
        <input type="submit" class="btn btn-info" name="submitButton"</pre>
value="Homepage" />
      </form>
    </div>
  </body>
</html>
```

Transactions.jsp

```
<%@page import="java.sql.ResultSet"%> <%@ page language="java"</pre>
contentType="text/html; charset=ISO-8859-1" pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
  <head>
    <meta charset="ISO-8859-1" />
    <title>All Transactions</title>
    <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>
    <div class="container-fluid transactions">
      <form method="post" action="transactionsTable.jsp">
        <h2>Date Range</h2>
        <div class="form-group">
          <label class="form-label" for="fromDate">From Date</label>
          <input</pre>
```

```
type="date"
            class="form-control"
            id="fromDate"
            name="fromDate"
            placeholder="From Date"
          />
        </div>
        <div class="form-group">
          <label class="form-Label" for="toDate">To Date</label>
            type="date"
            class="form-control"
            id="toDate"
            name="toDate"
            placeholder="To Date"
        </div>
        <input type="submit" class="btn btn-outline-success" value="Submit" />
      </form>
      <form action="homepage.jsp">
        <input type="submit" class="btn btn-info" name="submitButton"</pre>
value="Homepage" />
      </form>
    </div>
  </body>
</html>
```

transactionsTable.jsp

```
<%@page import="java.sql.DriverManager"%> <%@page import="java.sql.ResultSet"%>
<%@page import="java.sql.Statement"%> <%@page import="java.sql.Connection"%> <%</pre>
String from_date=request.getParameter("fromDate"); String
to_date=request.getParameter("toDate"); String accountNumber =
request.getSession().getAttribute("session_accountNumber").toString(); String
driver = "com.mysql.cj.jdbc.Driver"; String connectionUrl =
"jdbc:mysql://localhost:3306/"; String database = "bank"; String userid =
"root"; String password = "kumar.shubham"; try { Class.forName(driver); } catch
(ClassNotFoundException e) { e.printStackTrace(); } Connection connection =
null; Statement statement = null; ResultSet resultSet = null; %>
<!DOCTYPE html>
<html>
   <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
   <link rel="stylesheet" href="styles.css">
  </head>
  <body>
   <div class="container-fluid tr-table">
     <h3>Transactions</h3>
     <thead>
         >
```

```
SL. No.
          Account Number
          Beneficiary Account No.
          Date
          Description
          Cheque No.
          Withdraw
          Deposit
          Available Balance
        </thead>
       <% try{ connection =</pre>
        DriverManager.getConnection(connectionUrl+database, userid, password);
        statement=connection.createStatement(); String sql ="select * from
transactions where date between '" + from_date + "' and '" + to_date + "' and
accountNumber = '" + accountNumber + "'";
        resultSet = statement.executeQuery(sql); int i=1; while(resultSet.next()) {
%>
        <\td><\td>
          <%i++; %>
          <%=resultSet.getString("accountNumber") %>
          <%=resultSet.getString("beneficiaryAccountNumber") %>
          <%=resultSet.getString("date") %>
          <%=resultSet.getString("description") %>
          <%=resultSet.getString("chequeNo") %>
          <%=resultSet.getDouble("withdraw") %>
          <%=resultSet.getDouble("deposit") %>
          <%=resultSet.getDouble("balance") %>
        <% } connection.close(); } catch (Exception e) { e.printStackTrace();</pre>
        } %>
       <form method="post" action="transactions.jsp">
       <input type="submit" class="btn btn-outline-success" value="Go Back" />
     </form>
     <form method="post" action="homepage.jsp">
       <input type="submit" class="btn btn-info" value="Homepage" />
     </form>
   </div>
 </body>
</html>
```

createAccount.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
```

```
<html>
  <head>
    <meta charset="ISO-8859-1" />
    <title>Create Account</title>
    <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>
    <div class="container-fluid create">
      <form action="CreateAccount" method="post">
        <div class="form-group">
          <label class="form-label" for="name">Enter Name</label>
          <input</pre>
            type="text"
            class="form-control"
            name="name"
            placeholder="Name"
          />
        </div>
        <div class="form-group">
          <label class="form-label" for="dob">Select Date of Birth</label>
          <input</pre>
            type="date"
            class="form-control"
            id="dob"
            name="dob"
            placeholder="Date of Birth"
          />
        </div>
        <div class="form-group">
          <label class="form-label" for="address">Enter Address</label>
          <textarea
            class="form-control"
            id="address"
            name="address"
            placeholder="Address"
          ></textarea>
        </div>
        <div class="form-group">
          <label class="form-label" for="email">Enter Email</label>
          <input</pre>
            type="email"
            id="email"
            class="form-control"
            name="email"
            placeholder="Email"
          />
        </div>
        <div class="form-group">
```

Homepage.jsp

```
<<mppage language="java" contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPF html>
<%@page import="java.sql.*" %> <% String BankAccount = ""; if</pre>
(request.getParameter("BankAccountNumber") == null) { BankAccount = ""; } else {
BankAccount = request.getParameter("BankAccountNumber"); } String accountNumber
= request.getSession().getAttribute("session_accountNumber").toString(); String
password = request.getSession().getAttribute("session password").toString();
String userAccountNumberCreated="";
if(!(request.getSession().getAttribute("userAccountCreated") == null)){
userAccountNumberCreated =
request.getSession().getAttribute("userAccountCreated").toString(); } String
userCardAllocated="";
if(!(request.getSession().getAttribute("userCardAllocated") == null)){
userCardAllocated =
request.getSession().getAttribute("userCardAllocated").toString(); } String
userCvv=""; if(!(request.getSession().getAttribute("userCvv") == null)){ userCvv
= request.getSession().getAttribute("userCvv").toString(); } %>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <title>Home Page</title>
    <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>
    <div class="container-fluid homepage" >
      <%if(!userAccountNumberCreated.isEmpty()){%>
        New Account Created with Account Number : <%= userAccountNumberCreated
        %>
      </h5>
      <%}%> <%if(!userCardAllocated.isEmpty()){%>
      <h5>Card Number allocated to New Account : <%= userCardAllocated %></h5>
      <%}%> <%if(!userCvv.isEmpty()){%>
      <h5>CVV allocated to New Card : <%= userCvv %></h5>
```

```
<%}%> <%if(accountNumber.isEmpty()) {%>
      <h5>Go Back and Login Again !</h5>
      <%} else { %>
      <h4>Account Number Logged In: <%= accountNumber %></h4>
      <%} %>
      <form action="createAccount.jsp" method="Get">
        <% if (accountNumber.isEmpty()) {%>
        <input</pre>
          type="submit"
          class="btn btn-lg btn-primary"
          value="Create Account"
          disabled
        />
        <% } else {%>
        <input type="submit" class="btn btn-primary" value="Create Account" />
        <%}%>
      </form>
      <form action="debitOrCredit.jsp" method="Post">
        <% if (accountNumber.isEmpty()) {%>
        <input</pre>
          type="submit"
          class="btn btn-secondary btn-lg"
          value="Debit or Credit"
          disabled
        />
        <% } else {%>
        <input type="submit" class="btn btn-outline-primary" value="Debit or Credit"</pre>
/>
        <%}%>
      </form>
      <form action="transactions.jsp" method="Post">
        <% if (accountNumber.isEmpty()) {%>
        <input</pre>
          type="submit"
          class="btn btn-secondary btn-lg"
          value="Transactions"
          disabled
        />
        <% } else {%>
        <input type="submit" class="btn btn-outline-primary" value="Transactions" />
        <%}%>
      </form>
      <form action="authorizeCreditCard.jsp" method="Post">
        <% if (accountNumber.isEmpty()) {%>
        <input</pre>
          type="submit"
          class="btn btn-secondary btn-lq"
          value="Authorize Credit Card"
          disabled
        />
        <% } else {%>
        <input</pre>
          type="submit"
          class="btn btn-outline-primary"
          value="Authorize Credit Card"
```

authorizeCreditCard.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"</pre>
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
  <head>
    <meta charset="ISO-8859-1" />
    <title>Authorize Credit Card</title>
    <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>
    <div class="container-fluid authorize">
      <h3>Authorize Credit Card</h3>
      <% String message = ""; if(!(request.getSession().getAttribute("message")</pre>
      == null)){ message =
      request.getSession().getAttribute("message").toString(); }
      if(!message.isEmpty()){ %>
      <h5><%= message %></h5>
      <%}%>
      <form action="Authorize" method="post">
        <div class="form-group">
          <label class="form-label" class="form-label class="form-label""</pre>
for="name">Enter Name</label>
          <input</pre>
            type="text"
            class="form-control"
            name="name"
            placeholder="Name"
          />
        </div>
        <div class="form-group">
          <label class="form-label" class="form-label" for="cardNumber">Enter Card
Number</label>
          <input</pre>
            type="number"
            class="form-control"
            id="cardNumber"
            name="cardNumber"
            placeholder="Credit Card Number"
          />
```

```
</div>
        <div class="form-group">
          <label class="form-label" for="cvv">Enter CVV/CVV2</label>
          <input</pre>
            type="number"
            class="form-control"
            id="cvv"
            name="cvv"
            placeholder="CVV"
        </div>
        <div class="form-group">
          <label class="form-label" for="amount">Amount</label>
          <input</pre>
            type="number"
            class="form-control"
            name="amount"
            id="amount"
            placeholder="0"
          />
        </div>
        <input type="submit" class="btn btn-outline-success" value="Authorize" />
      </form>
      <form action="homepage.jsp">
        <input type="submit" class="btn btn-info" name="submitButton"</pre>
value="Homepage" />
      </form>
    </div>
  </body>
</html>
```

Authorized.jsp

unAuthorized.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"</pre>
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
  <head>
    <meta charset="ISO-8859-1" />
    <title>Card Unauthorized</title>
    <link rel="stylesheet" href="bootstrap.min.css" type="text/css" />
    <link rel="stylesheet" href="styles.css" />
  </head>
  <body>
    <div class="container-fluid unauthorized">
        Card is not Authorized to make a transaction of :
        <%=request.getSession().getAttribute("session_amount").toString() %>
      </h3>
        Please Check card details or transaction limit as it is less than
        100000.
      </h3>
      <form method="post" action="authorizeCreditCard.jsp">
        <input type="submit" class="btn btn-outline-success" value="Check Again" />
      </form>
      <form action="homepage.jsp">
        <input type="submit" class="btn btn-info" name="submitButton"</pre>
value="Homepage" />
      </form>
    </div>
  </body>
</html>
```

LoginCheck.java

```
package com.user;
import java.io.IOException;
import java.io.PrintWriter;
```

```
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;
import javax.servlet.RequestDispatcher;
import javax.servlet.http.HttpSession;
import javax.servlet.http.Cookie;
@WebServlet(urlPatterns = { "/LoginCheck" })
public class LoginCheck extends HttpServlet {
  private static final long serialVersionUID = 1L;
  @Override
  protected void doGet(HttpServletRequest request, HttpServletResponse response)
      throws ServletException, IOException {
    // super.doGet(request, response);
    processRequest(request, response);
  }
  @Override
  protected void doPost(HttpServletRequest request, HttpServletResponse response)
      throws ServletException, IOException {
    // super.doPost(request, response);
    processRequest(request, response);
  }
```

```
void processRequest(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    HttpSession session = request.getSession(true);
    response.setContentType("text/html;charset=UTF-8");
    try (PrintWriter out = response.getWriter()) {
      try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        String url = "jdbc:mysql://localhost:3306/bank?autoReconnect=true&useSSL=false";
        String user = "root";
        String password = "kumar.shubham";
        Connection connection = null;
        Statement statement = null;
        connection = DriverManager.getConnection(url, user, password);
        String query = "SELECT * FROM user_pass";
        statement = connection.createStatement();
        String userAccountNumber = request.getParameter("accountNumber");
        String userPassword = request.getParameter("password");
        if (userAccountNumber.isEmpty() | | userPassword.isEmpty()) {
          RequestDispatcher dispatcher = request.getRequestDispatcher("index.jsp");
          dispatcher.include(request, response);
          out.println("<script type=\"text/javascript\">");
          out.println("alert('Empty Account Number or Password or Not Authorized');");
          out.println("</script>");
        } else {
          int flag = 0;
```

```
String correctAccountNumber = "", correctPassword = "";
ResultSet resultSet = statement.executeQuery(query);
System.out.println(userAccountNumber);
while (resultSet.next()) {
  if (resultSet.getString("accountNumber").equals(userAccountNumber)
      && resultSet.getString("password").equals(userPassword)) {
    flag++;
    correctAccountNumber = resultSet.getString("accountNumber");
  }
}
statement.close();
if (flag != 0) {
  /*
   * if (session.isNew() == false) { session.invalidate(); session =
   * request.getSession(true); }
   */
  session.setAttribute("session_accountNumber", correctAccountNumber);
  session.setAttribute("session_password", correctPassword);
  Cookie cookie ID = new Cookie("cookie_accountNumber", correctAccountNumber);
  cookie ID.setMaxAge(365 * 24 * 60 * 60);
  cookie_ID.setPath("/");
  response.addCookie(cookie_ID);
  request.setAttribute("BankAccountNumber", correctAccountNumber);
  RequestDispatcher dispatcher = request.getRequestDispatcher("homepage.jsp");
  dispatcher.forward(request, response);
} else {
```

```
RequestDispatcher dispatcher = request.getRequestDispatcher("index.jsp");
            dispatcher.include(request, response);
            out.println("<script type=\'text/javascript\'>");
            out.println("alert('Wrong Credentials or Unauthorized Access!');");
            out.println("location='index.jsp';");
            out.println("</script>");
          }
        }
      } catch (Exception e) {
        System.err.println("Got an exception! ");
        e.printStackTrace();
      }
    }
  }
}
DebitCredit.java
package com.user;
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.Statement;
import java.time.LocalDate;
```

```
import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
@WebServlet(urlPatterns = { "/DebitCredit" })
public class DebitCredit extends HttpServlet {
       private static final long serialVersionUID = 1L;
       void processRequest(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
               HttpSession session = request.getSession(true);
               response.setContentType("text/html;charset=UTF-8");
               try (PrintWriter out = response.getWriter()) {
                       try {
                              Class.forName("com.mysql.cj.jdbc.Driver");
                              String url =
"jdbc:mysql://localhost:3306/bank?autoReconnect=true&useSSL=false";
                              String user = "root";
                              String password = "kumar.shubham";
                              Connection connection = null;
                              Statement statement = null;
```

```
connection = DriverManager.getConnection(url, user, password);
                              statement = connection.createStatement();
                              String beneficiaryAccountNumber =
request.getParameter("beneficiaryAccountNumber").toString();
                              Double amount = 0.0;
                              if (!request.getParameter("amount").toString().isEmpty()) {
                                     amount =
Double.parseDouble(request.getParameter("amount"));
                              }
                              String description = request.getParameter("description");
                              String chequeNo = request.getParameter("chequeNo");
                              LocalDate todayLocalDate = LocalDate.now();
                              java.sql.Date currentDate = java.sql.Date.valueOf(todayLocalDate);
                              Double deposit = 0.0;
                              Double withdraw = 0.0;
                              if (beneficiaryAccountNumber.isEmpty() | | amount == 0.0) {
                                     session.setAttribute("message", "Account Number and
Amount can't be empty !");
                                     RequestDispatcher dispatcher =
request.getRequestDispatcher("debitOrCredit.jsp");
                                     dispatcher.include(request, response);
                                     dispatcher.forward(request, response);
                                     out.println("<script type=\"text/javascript\">");
```

```
out.println("alert('Account Number and Amount can't be
empty !');");
                                     out.println("</script>");
                              } else {
                                     String sql = "CREATE TABLE IF NOT EXISTS" + "transactions"
                                                    + " (accountNumber
                                                                              varchar(200),"
                                                    + " beneficiaryAccountNumber
varchar(200)," + " date
                            date,"
                                                    + " description
                                                                         varchar(200)," + "
chequeNo VARCHAR(100),"
                                                    +" withdraw double,"+" deposit
double," + " balance double)";
                                     statement = connection.createStatement();
                                     Boolean status = statement.execute(sql);
                                     sql = "select * from account_details where accountNumber=""
+ beneficiaryAccountNumber + "'";
                                     ResultSet rs = statement.executeQuery(sql);
                                     if (rs.next()) {
                                             sql = "Select accountNumber, balance from
account_details where accountNumber=""
session.getAttribute("session_accountNumber") + "'";
                                             rs = statement.executeQuery(sql);
                                             String accountNumber = "";
                                             Double balance = 0.0;
```

```
while (rs.next()) {
                                                     accountNumber =
rs.getString("accountNumber");
                                                     balance = rs.getDouble("balance");
                                             }
                                             sql = "Select accountNumber, balance from
account_details where accountNumber=""
                                                             + beneficiaryAccountNumber + "'";
                                             rs = statement.executeQuery(sql);
                                             Double beneficiaryBalance = 0.0;
                                             while (rs.next()) {
                                                     beneficiaryBalance = rs.getDouble("balance");
                                             }
                                             String submitButton =
request.getParameter("submitButton");
                                             if (submitButton.equals("Debit From")) {
                                                     balance += amount;
                                                     beneficiaryBalance -= amount;
                                                     withdraw = amount;
                                             } else if (submitButton.equals("Credit To")) {
                                                     balance -= amount;
                                                     beneficiaryBalance += amount;
                                                     deposit = amount;
                                             } else {
                                                     RequestDispatcher dispatcher =
request.getRequestDispatcher("debitOrCredit.jsp");
```

```
dispatcher.include(request, response);
                                              }
                                              PreparedStatement ps = connection
                                                             .prepareStatement("UPDATE
account_details SET balance = ? where accountNumber = ?;");
                                              ps.setDouble(1, balance);
                                              ps.setString(2, accountNumber);
                                              status = ps.execute();
                                              ps.setDouble(1, beneficiaryBalance);
                                              ps.setString(2, beneficiaryAccountNumber);
                                              status = ps.execute();
                                              ps = connection.prepareStatement(
                                                             "insert into
transactions(accountNumber, beneficiaryAccountNumber, date, description, chequeNo, withdraw,
deposit, balance) values(?,?,?,?,?,?,?)");
                                              ps.setString(1, accountNumber);
                                              ps.setString(2, beneficiaryAccountNumber);
                                              ps.setDate(3, currentDate);
                                              ps.setString(4, description);
                                              ps.setString(5, chequeNo);
                                              ps.setDouble(6, withdraw);
                                              ps.setDouble(7, deposit);
                                              ps.setDouble(8, balance);
                                              status = ps.execute();
```

```
String query = "SELECT balance from account_details
where accountNumber = " + accountNumber;
                                              Boolean checkBalance1 = false;
                                              ResultSet resultSet = statement.executeQuery(query);
                                              while (resultSet.next()) {
                                                     if (resultSet.getDouble("balance") == balance)
{
                                                             checkBalance1 = true;
                                                     }
                                             }
                                              query = "SELECT balance from account_details where
accountNumber = " + beneficiaryAccountNumber;
                                              Boolean checkBalance2 = false;
                                              resultSet = statement.executeQuery(query);
                                              while (resultSet.next()) {
                                                     if (resultSet.getDouble("balance") ==
beneficiaryBalance) {
                                                             checkBalance2 = true;
                                                     }
                                              }
                                              statement.close();
                                              ps.close();
                                              if (checkBalance1 && checkBalance2) {
                                                     session.setAttribute("message", "Transaction
Successfull!");
```

```
RequestDispatcher dispatcher =
request.getRequestDispatcher("debitOrCredit.jsp");
                                                       dispatcher.include(request, response);
                                                       dispatcher.forward(request, response);
                                                       out.println("<script type=\'text/javascript\'>");
                                                       out.println("alert('Transaction Successfull!');");
                                                       out.println("</script>");
                                               } else {
                                                       session.setAttribute("message", "Transaction
Failed, Try Again!");
                                                       RequestDispatcher dispatcher =
request.getRequestDispatcher("debitOrCredit.jsp");
                                                       dispatcher.include(request, response);
                                                       dispatcher.forward(request, response);
                                                       out.println("<script type=\'text/javascript\'>");
                                                       out.println("alert('Transaction Failed, Try
Again!');");
                                                       out.println("</script>");
                                               }
                                       } else {
                                               session.setAttribute("message", "Enter Valid Account
Number!");
                                               RequestDispatcher dispatcher =
request.getRequestDispatcher("debitOrCredit.jsp");
                                               dispatcher.include(request, response);
                                               dispatcher.forward(request, response);
                                               out.println("<script type=\"text/javascript\">");
                                               out.println("alert('Enter Valid Account Number!`);");
                                               out.println("</script>");
                                       }
```

```
}
                      } catch (Exception e) {
                              System.err.println("Got an exception! ");
                              e.printStackTrace();
                      }
              }
       }
       @Override
       protected void doPost(HttpServletRequest request, HttpServletResponse response)
                      throws ServletException, IOException {
              processRequest(request, response);
       }
       @Override
       protected void doGet(HttpServletRequest request, HttpServletResponse response)
                      throws ServletException, IOException {
              processRequest(request, response);
       }
}
CreateAccount.java
package com.user;
import java.io.IOException;
import java.io.PrintWriter;
```

```
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;
import java.util.*;
import javax.servlet.RequestDispatcher;
import javax.servlet.http.HttpSession;
@WebServlet(urlPatterns = { "/CreateAccount" })
public class CreateAccount extends HttpServlet {
       private static final long serialVersionUID = 1L;
       public String generateRandomNumbers(int n) {
               Random rnd = new Random();
               char[] digits = new char[n];
               digits[0] = (char) (rnd.nextInt(9) + '1');
               for (int i = 1; i < digits.length; i++) {
                       digits[i] = (char) (rnd.nextInt(10) + '0');
               }
               return (new String(digits));
       }
       void processRequest(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
               HttpSession session = request.getSession(true);
               response.setContentType("text/html;charset=UTF-8");
```

```
try (PrintWriter out = response.getWriter()) {
                      try {
                              Class.forName("com.mysql.cj.jdbc.Driver");
                              String url =
"jdbc:mysql://localhost:3306/bank?autoReconnect=true&useSSL=false";
                              String user = "root";
                              String password = "kumar.shubham";
                              Connection connection = null;
                              Statement statement = null;
                              connection = DriverManager.getConnection(url, user, password);
                              statement = connection.createStatement();
                              String userName = request.getParameter("name");
                              String userDOB = request.getParameter("dob").toString();
                              String userAdress = request.getParameter("address");
                              String userEmail = request.getParameter("email").toString();
                              String userAccountNumber = generateRandomNumbers(12);
                              String userCvv = generateRandomNumbers(3);
                              String userCardNumber = generateRandomNumbers(16);
                              String userAccountType =
request.getParameter("accountType").toString();
                              if (userName.isEmpty() || userDOB.isEmpty() || userAdress.isEmpty()
| | userEmail.isEmpty()
                                             || userAccountType.isEmpty()) {
```

```
RequestDispatcher dispatcher =
request.getRequestDispatcher("homepage.jsp");
                                    dispatcher.include(request, response);
                                    out.println("<script type=\"text/javascript\">");
                                    out.println("alert('All the fields are mandatory, Fill All of Them
!');");
                                    out.println("</script>");
                             } else {
                                    String sqlCreate = "CREATE TABLE IF NOT EXISTS" +
"user_pass"
                                                   + " (accountNumber Varchar(100)," + "
password VARCHAR(100))";
                                    Boolean status = statement.execute(sqlCreate);
                                    sqlCreate = "CREATE TABLE IF NOT EXISTS" +
"account_details" + " (name
                                varchar(200),"
                                                   +" dob
                                                                varchar(100)," + " address
varchar(200),"
                                                   +" email
                                                                  varchar(200)," + "
typeOfAccount VARCHAR(100),"
                                                   + " accountNumber VARCHAR(100)," + "
cardNumber VARCHAR(100),"
                                                   + " cvv VARCHAR(10)," + " balance
double)";
                                    statement = connection.createStatement();
                                    status = statement.execute(sqlCreate);
```

```
PreparedStatement ps = connection.prepareStatement(
                                                     "insert into account_details(name, dob,
address, email, typeofAccount, accountNumber, cardNumber, cvv, balance) values(?,?,?,?,?,?,?)");
                                      ps.setString(1, userName);
                                      ps.setString(2, userDOB);
                                      ps.setString(3, userAdress);
                                      ps.setString(4, userEmail);
                                      ps.setString(5, userAccountType);
                                      ps.setString(6, userAccountNumber);
                                      ps.setString(7, userCardNumber);
                                      ps.setString(8, userCvv);
                                      ps.setDouble(9, 0.0);
                                      status = ps.execute();
                                      ps = connection.prepareStatement("insert into
user_pass(accountNumber, password) values(?,?)");
                                      ps.setString(1, userAccountNumber);
                                      ps.setString(2, "");
                                      status = ps.execute();
                                      int flag = 0;
                                      String query = "SELECT accountNumber from account_details
where accountNumber = "
                                                     + userAccountNumber;
                                      String correctAccountNumber = "";
                                      ResultSet resultSet = statement.executeQuery(query);
```

```
while (resultSet.next()) {
                                              System.out.println("inside loop");
                                              if
(resultSet.getString("accountNumber").equals(userAccountNumber)) {
                                                      flag++;
                                                      correctAccountNumber =
resultSet.getString("accountNumber");
                                              }
                                      }
                                      statement.close();
                                      ps.close();
                                      if (flag != 0) {
                                              session.setAttribute("userAccountCreated",
correctAccountNumber);
                                              session.setAttribute("userCardAllocated",
userCardNumber);
                                              session.setAttribute("userCvv", userCvv);
                                              RequestDispatcher dispatcher =
request.getRequestDispatcher("homepage.jsp");
                                              dispatcher.include(request, response);
                                              out.println("<script type=\"text/javascript\">");
                                              out.println("alert('Account Created!`);");
                                              out.println("</script>");
                                              dispatcher.forward(request, response);
                                      } else {
                                              RequestDispatcher dispatcher =
request.getRequestDispatcher("homepage.jsp");
```

```
dispatcher.include(request, response);
                                      out.println("<script type=\"text/javascript\">");
                                      out.println("alert(`Account not created!`);");
                                      out.println("</script>");
                              }
                       }
               } catch (Exception e) {
                       System.err.println("Got an exception! ");
                       e.printStackTrace();
               }
       }
}
@Override
protected void doPost(HttpServletRequest request, HttpServletResponse response)
               throws ServletException, IOException {
       processRequest(request, response);
}
@Override
protected void doGet(HttpServletRequest request, HttpServletResponse response)
               throws ServletException, IOException {
       processRequest(request, response);
}
```

}

Authorize.java

```
package com.user;
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
@WebServlet(urlPatterns = { "/Authorize" })
public class Authorize extends HttpServlet {
  private static final long serialVersionUID = 1L;
  @Override
  protected void doGet(HttpServletRequest request, HttpServletResponse response)
      throws ServletException, IOException {
    // super.doGet(request, response);
    processRequest(request, response);
  }
```

```
@Override
  protected void doPost(HttpServletRequest request, HttpServletResponse response)
      throws ServletException, IOException {
    // super.doPost(request, response);
    processRequest(request, response);
  }
  void processRequest(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    HttpSession session = request.getSession(true);
    response.setContentType("text/html;charset=UTF-8");
    try (PrintWriter out = response.getWriter()) {
      try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        String url = "jdbc:mysql://localhost:3306/bank?autoReconnect=true&useSSL=false";
        String user = "root";
        String password = "kumar.shubham";
        Connection connection = null;
        Statement statement = null;
        connection = DriverManager.getConnection(url, user, password);
        String query = "";
        statement = connection.createStatement();
```

```
String cardNumber = request.getParameter("cardNumber");
        String cvv = request.getParameter("cvv");
        Double amount = 0.0;
        if (!request.getParameter("amount").toString().isEmpty()) {
          amount = Double.parseDouble(request.getParameter("amount"));
        }
        if (name.isEmpty() || cardNumber.isEmpty() || cvv.isEmpty() || amount <= 0) {
          RequestDispatcher dispatcher = request.getRequestDispatcher("authorizeCreditCard.jsp");
          dispatcher.include(request, response);
          out.println("<script type=\"text/javascript\">");
          out.println("alert('Empty Fields and Transaction below 0 is not valid !');");
          out.println("</script>");
          session.setAttribute("message", "Empty Fields and Transaction below 0 is not valid !");
          dispatcher.forward(request, response);
        } else {
          int flag = 0;
          query = "select * from account_details where cardNumber=" + cardNumber;
          ResultSet resultSet = statement.executeQuery(query);
          if (!resultSet.next()) {
            RequestDispatcher dispatcher =
request.getRequestDispatcher("authorizeCreditCard.jsp");
            dispatcher.include(request, response);
```

String name = request.getParameter("name");

```
out.println("<script type=\"text/javascript\">");
    out.println("alert('Card Not Found !');");
    out.println("</script>");
    session.setAttribute("message", "Card Not Found !");
    dispatcher.forward(request, response);
  }
  resultSet = statement.executeQuery(query);
  while (resultSet.next()) {
    if (resultSet.getString("cardNumber").equals(cardNumber)
        && resultSet.getString("cvv").equals(cvv) && amount > 0 && amount <= 100000) {
      flag++;
    }
  }
  session.setAttribute("session_amount", amount);
  statement.close();
  System.out.println(flag);
  if (flag != 0) {
    RequestDispatcher dispatcher = request.getRequestDispatcher("authorized.jsp");
    dispatcher.include(request, response);
  } else {
    RequestDispatcher dispatcher = request.getRequestDispatcher("unAuthorized.jsp");
    dispatcher.include(request, response);
  }
}
```

```
} catch (Exception e) {
        System.err.println("Got an exception! ");
        e.printStackTrace();
    }
}
```