Rajalakshmi Engineering College

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Department of Computer Science and Engineering



Servlet - MySQL Connectivity

Banking Application

User Manual

(Windows Operating System)

'



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**QUESTION**

Create relations using MYSQL for a banking application given below enforcing primary key and foreign key constraints:

CUSTOMER (CID, CNAME)

ACCOUNT (ANO, ATYPE, BALANCE, CID)

An account can be a savings account or a current account. Check ATYPE in ‘S’ or ‘C’. A customer can have both types of accounts.

TRANSACTION (TID, ANO, TTYPE, TDATE, TAMOUNT) TTYPE can be ‘D’ or ‘W’

D- Deposit; W – Withdrawal

The primary keys are underlined.

Develop a Java Servlet application using database connectivity to list all records from the above relations and illustrate a join query and an update operation.

**MySQL**

1. Open MySQL.

2. Create a database.

mysql> create database banking; Query OK, 1 row affected (0.05 sec)

3. Connect to the database.

mysql> use banking; Database changed

4. Create the following tables:

mysql> create table customer (cid integer, cname varchar(20),

-> primary key (cid));

Query OK, 0 rows affected (0.08 sec)

mysql> create table account (ano integer, atype varchar(1),

-> balance integer, cid integer references customer (cid),

-> check (atype in ('S', 'C')), primary key (ano)); Query OK, 0 rows affected (0.06 sec)

mysql> create table transaction (tid integer,

-> ano integer references account(ano),

-> ttype varchar(1), adate date, tamount integer,

-> check ttype in ('D', 'W'), primary key (tid)); Query OK, 0 rows affected (0.06 sec)

5. Display the tables.

mysql> show tables;

+-------------------+

| Tables\_in\_banking |

+-------------------+

| account |

| customer |

| transaction |

+-------------------+

3 rows in set (0.00 sec)

6. Display the table structure.

mysql> describe customer;

+-------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------+-------------+------+-----+---------+-------+

| cid | int(11) | NO | PRI | 0 | |

| cname | varchar(20) | YES | | NULL | |

+-------+-------------+------+-----+---------+-------+

2 rows in set (0.00 sec)

mysql> describe account;

+---------+------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------+------------+------+-----+---------+-------+

| ano | int(11) | NO | PRI | 0 | |

| atype | varchar(1) | YES | | NULL | |

| balance | int(11) | YES | | NULL | |

| cid | int(11) | YES | | NULL | |

+---------+------------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql> describe transaction;

+---------+------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------+------------+------+-----+---------+-------+

| tid | int(11) | NO | PRI | 0 | |

| ano | int(11) | YES | | NULL | |

| ttype | varchar(1) | YES | | NULL | |

| adate | date | YES | | NULL | |

| tamount | int(11) | YES | | NULL | |

+---------+------------+------+-----+---------+-------+

5 rows in set (0.00 sec)

7. Insert rows in the table.

mysql> insert into customer values (1, 'Arun'); Query OK, 1 row affected (0.03 sec)

mysql> insert into customer values (2, 'Babu'); Query OK, 1 row affected (0.01 sec)

mysql> insert into customer values (3, 'Chithra'); Query OK, 1 row affected (0.03 sec)

mysql> insert into account values (1, 'S', 1000, 1); Query OK, 1 row affected (0.03 sec)

mysql> insert into account values (2, 'S', 2000, 2); Query OK, 1 row affected (0.03 sec)

mysql> insert into account values (3, 'S', 1000, 3); Query OK, 1 row affected (0.03 sec)

mysql> insert into account values (4, 'C', 5000, 3); Query OK, 1 row affected (0.03 sec)

mysql> insert into transaction values (1, 1, 'D', '2014-04-21', 1000); Query OK, 1 row affected (0.05 sec)

mysql> insert into transaction values (2, 3, 'D', '2014-04-21', 10000); Query OK, 1 row affected (0.02 sec)

mysql> insert into transaction values (3, 2, 'W', '2014-04-21', 1000); Query OK, 1 row affected (0.03 sec)

mysql> insert into transaction values (4, 4, 'W', '2014-04-21', 1000); Query OK, 1 row affected (0.03 sec)

8. Display the records from the table.

mysql> select \* from customer;

+-----+---------+

| cid | cname |

+-----+---------+

| 1 | Arun |

| 2 | Babu |

| 3 | Chithra |

+-----+---------+

3 rows in set (0.00 sec)

mysql> select \* from account;

+-----+-------+---------+------+

| ano | atype | balance | cid |

+-----+-------+---------+------+

| 1 | S | 1000 | 1 |

| 2 | S | 2000 | 2 |

| 3 | S | 1000 | 3 |

| 4 | C | 5000 | 3 |

+-----+-------+---------+------+

4 rows in set (0.00 sec)

mysql> select \* from transaction;

+-----+------+-------+------------+---------+

| tid | ano | ttype | adate | tamount |

+-----+------+-------+------------+---------+

| 1 | 1 | D | 2014-04-21 | 1000 |

| 2 | 3 | D | 2014-04-21 | 10000 |

| 3 | 2 | W | 2014-04-21 | 1000 |

| 4 | 4 | W | 2014-04-21 | 1000 |

+-----+------+-------+------------+---------+

4 rows in set (0.00 sec)

**Servlet – MySQL – Connectivity**

**Displaying Customer Information**

1. Open Eclipse

2. Select the Workspace.

3. Select File Æ New Æ Other.

4. Select Dynamic Web Project under Web.

5. Click Next.

6. Enter the Project name as Banking.

7. Choose Target runtime as Apache Tomcat v7.0.

8. Click Next.

9. Click Next.

10. Click Finish.

11. Click Yes for Open Associated Perspective?

12. Select Banking Project in the Package Explorer (available in the left hand side of the window).

13. Right Click Æ New Æ HTML File.

14. Enter the File name as CustomerInfo.

15. Click Next.

16. Click Finish.

17. Change the title as Customer Info.

18. Enter the following code inside the body tag:

<form method=*"post"* action=*"CustomerInfo"*>

<center>

<h2>Customer Info</h2>

</center>

<hr>

Enter the Customer Id.

<input type=*"text"* name=*"cid"*>

<input type=*"submit"* value=*"Get Details"*>

</form>

19. Select Banking Project in the Package Explorer (available in the left hand side of the window).

20. Right Click Æ New Æ Servlet.

21. Enter the Class name as CustomerInfo.

22. Click Next.

23. Click Next.

24. Uncheck the Constructors from superclass option.

25. Uncheck the doGet option.

26. Click Finish.

27. Enter the following code above the doPost method:

Connection conn = **null**; PreparedStatement ps = **null**; ResultSet rs = **null**;

28. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'Connection'(java.sql) for the Connection.

Import 'PreparedStatement'(java.sql) for the PreparedStatement.

Import 'ResultSet'(java.sql) for the ResultSet.

29. Enter the following code inside the doPost method:

response.setContentType("text/html"); PrintWriter out = response.getWriter();

30. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'PrintWriter'(java.io) for the PrintWriter.

31. Create a try...catch block inside the doPost method:

**try**

{

}

**catch**(Exception e)

{

*out*.println(e);

}

32. Enter the following statements inside the try block:

Class.*forName*("com.mysql.jdbc.Driver");

String URL = "jdbc:mysql://localhost:3306/banking";

conn = DriverManager.*getConnection*(URL, "root", "admin");

33. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'DriverManager'(java.sql) for the DriverManager.

34. Select the file mysql-connector-java-5.1.29-bin.jar from your hard disk and press Ctrl+C to copy.

35. Select Banking in the Package Explorer.

36. Select WebContent Æ WEB-INF Æ lib.

37. Press Ctrl+V to paste.

38. Continue entering the following statements inside the try block:

ps = conn.prepareStatement("select \* from customer where cid = ?"); String cid = request.getParameter("cid");

ps.setString(1, cid);

rs = ps.executeQuery();

**if**(rs.next())

{

out.println("<center><h3>Customer Info</h3></center>");

out.println("<hr>");

out.println("Customer Id. :" + rs.getInt(1));

out.println("<br>");

out.println("Name :" + rs.getString(2));

out.println("<br>");

}

rs.close(); ps.close(); conn.close();

39. Right Click inside the Code Window of CustomerInfo.html.

40. Select Run As Æ Run on Server.

41. Select the Tomcat v7.0 Server at localhost.

42. Click Next.

43. Click Finish.

44. It will open a browser window.

45. Enter the Customer Id. and click Get Details.

46. The records will be displayed in browser window.

47. The full source code for CustomerInfo.html is:

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" ["http://www.w3.org/TR/html4/loose.dtd">](http://www.w3.org/TR/html4/loose.dtd)

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>

<title>Customer Info</title>

</head>

<body>

<form method=*"post"* action=*"IndCustomerInfo"*>

<center>

<h2>Customer Info</h2>

</center>

<hr>

Enter the Customer Id.

<input type=*"text"* name=*"cid"*>

<input type=*"submit"* value=*"Get Details"*>

</form>

</body>

</html>

48. The full source code for CustomerInfo.java is:

**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** javax.servlet.ServletException; **import** javax.servlet.annotation.WebServlet; **import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class IndCustomerInfo

\*/

[@WebServlet("/IndCustomerInfo")](mailto:@WebServlet)

**public class** IndCustomerInfo **extends** HttpServlet {

**private static final long** *serialVersionUID* = 1L;

/\*\*

\* [**@see** HttpServlet#doPost(HttpServletRequest request, HttpServletResponse](mailto:@see)

response)

\*/

Connection conn = **null**;

PreparedStatement ps = **null**; ResultSet rs = **null**;

**protected void** doPost(HttpServletRequest request, HttpServletResponse response)

**throws** ServletException, IOException {

// **TODO** Auto-generated method stub

response.setContentType("text/html"); PrintWriter out = response.getWriter();

**try**

{

Class.*forName*("com.mysql.jdbc.Driver");

String URL = "jdbc:mysql://localhost:3306/banking";

conn = DriverManager.*getConnection*(URL, "root", "admin");

ps = conn.prepareStatement("select \* from customer where cid = ?"); String cid = request.getParameter("cid");

ps.setString(1, cid);

rs = ps.executeQuery();

**if**(rs.next())

{

out.println("<center><h3>Customer Info</h3></center>");

out.println("<hr>");

out.println("Customer Id. :" + rs.getInt(1));

out.println("<br>");

out.println("Name :" + rs.getString(2));

out.println("<br>");

}

rs.close(); ps.close(); conn.close();

}

**catch**(Exception e)

{

out.println(e);

}

}

}

**Servlet – MySQL – Connectivity**

**Displaying Account Information**

1. Select Banking Project in the Package Explorer (available in the left hand side of the window).

2. Right Click Æ New Æ HTML File.

3. Enter the File name as AccountInfo.

4. Click Next.

5. Click Finish.

6. Change the title as Account Info.

7. Enter the following code inside the body tag:

<form method=*"post"* action=*"AccountInfo"*>

<center>

<h2>Account Info</h2>

</center>

<hr>

Enter the Account No.

<input type=*"text"* name=*"ano"*>

<input type=*"submit"* value=*"Get Details"*>

</form>

8. Select Banking Project in the Package Explorer (available in the left hand side of the window).

9. Right Click Æ New Æ Servlet.

10. Enter the Class name as AccountInfo.

11. Click Next.

12. Click Next.

13. Uncheck the Constructors from superclass option.

14. Uncheck the doGet option.

15. Click Finish.

16. Enter the following code above the doPost method:

Connection conn = **null**; PreparedStatement ps = **null**; ResultSet rs = **null**;

17. Remove the warnings by click into the x mark in the left hand side and choose the following options:

Import 'Connection'(java.sql) for the Connection.

Import 'PreparedStatement'(java.sql) for the PreparedStatement. Import 'ResultSet'(java.sql) for the ResultSet.

18. Simply copy the code available in the doPost() method of CustomerInfo.java and paste inside the doPost() method of AccountInfo.java.

19. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'PrintWriter'(java.io) for the PrintWriter.

20. Do the following modifications in the code:

ps = conn.prepareStatement("select a.ano, a.atype, a.balance, a.cid, c.cname from account a, customer c where a.cid = ?");

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

ps.setString(1, ano);

rs = ps.executeQuery();

**if**(rs.next())

{

out.println("<center><h3>Account Info</h3></center>");

out.println("<hr>");

out.println("Account No. :" + rs.getInt(1));

out.println("<br>");

out.println("Type :" + rs.getString(2));

out.println("<br>");

out.println("Balance :" + rs.getInt(3));

out.println("<br>");

out.println("Customer Id. :" + rs.getInt(4));

out.println("<br>");

out.println("Name :" + rs.getString(5));

out.println("<br>");

}

rs.close(); ps.close(); conn.close();

21. Right Click inside the Code Window of MemberInfo.html.

22. Select Run As Æ Run on Server.

23. Select the Tomcat v7.0 Server at localhost.

24. Click Next.

25. Click Finish.

26. It will open a browser window.

27. Enter the Account No. and click Get Details.

28. The records will be displayed in browser window.

29. The full source code for AccountInfo.html is:

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" ["http://www.w3.org/TR/html4/loose.dtd">](http://www.w3.org/TR/html4/loose.dtd)

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>

<title>Account Info</title>

</head>

<body>

<form method=*"post"* action=*"AccountInfo"*>

<center>

<h2>Account Info</h2>

</center>

<hr>

Enter the Account No.

<input type=*"text"* name=*"ano"*>

<input type=*"submit"* value=*"Get Details"*>

</form>

</body>

</html>

30. The full source code for AccountInfo.java is:

**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** javax.servlet.ServletException; **import** javax.servlet.annotation.WebServlet; **import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class AccountInfo

\*/

[@WebServlet("/AccountInfo")](mailto:@WebServlet)

**public class** AccountInfo **extends** HttpServlet {

**private static final long** *serialVersionUID* = 1L;

Connection conn = **null**; PreparedStatement ps = **null**; ResultSet rs = **null**;

/\*\*

\* [**@see** HttpServlet#doPost(HttpServletRequest request, HttpServletResponse](mailto:@see)

response)

\*/

**protected void** doPost(HttpServletRequest request, HttpServletResponse response)

**throws** ServletException, IOException {

// **TODO** Auto-generated method stub

response.setContentType("text/html"); PrintWriter out = response.getWriter();

**try**

{

Class.*forName*("com.mysql.jdbc.Driver");

String URL = "jdbc:mysql://localhost:3306/banking";

conn = DriverManager.*getConnection*(URL, "root", "admin");

ps = conn.prepareStatement("select a.ano, a.atype, a.balance, a.cid, c.cname from account a, customer c where a.cid = ?");

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

ps.setString(1, ano);

rs = ps.executeQuery();

**if**(rs.next())

{

out.println("<center><h3>Account Info</h3></center>");

out.println("<hr>");

out.println("Account No. :" + rs.getInt(1));

out.println("<br>");

out.println("Type :" + rs.getString(2));

out.println("<br>");

out.println("Balance :" + rs.getInt(3));

out.println("<br>");

out.println("Customer Id. :" + rs.getInt(4));

out.println("<br>");

out.println("Name :" + rs.getString(5));

out.println("<br>");

}

rs.close(); ps.close(); conn.close();

}

**catch**(Exception e)

{

out.println(e);

}

}

}

**Servlet – MySQL – Connectivity**

**Inserting Customer Information**

1. Select Banking Project in the Package Explorer (available in the left hand side of the window).

2. Right Click Æ New Æ HTML File.

3. Enter the File name as CustomerInfoAdd.

4. Click Next.

5. Click Finish.

6. Change the title as Customer Info - Add.

7. Enter the following code inside the body tag:

<form method=*"post"* action=*"CustomerInfoAdd"*>

<center>

<h2>Customer Info - Add</h2>

</center>

<hr>

Customer Id.

<input type=*"text"* name=*"cid"*>

<br> Name

<input type=*"text"* name=*"cname"*>

<br>

<input type=*"submit"* value=*"Add Details"*>

</form>

8. Select Banking Project in the Package Explorer (available in the left hand side of the window).

9. Right Click Æ New Æ Servlet.

10. Enter the Class name as CustomerInfoAdd.

11. Click Next.

12. Click Next.

13. Uncheck the Constructors from superclass option.

14. Uncheck the doGet option.

15. Click Finish.

16. Enter the following code above the doPost method:

Connection conn = **null**; PreparedStatement ps = **null**;

17. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'Connection'(java.sql) for the Connection.

Import 'PreparedStatement'(java.sql) for the PreparedStatement.

18. Enter the following code inside the doPost method:

response.setContentType("text/html"); PrintWriter out = response.getWriter();

19. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'PrintWriter'(java.io) for the PrintWriter.

20. Create a try...catch block inside the doPost method:

**try**

{

}

**catch**(Exception e)

{

*out*.println(e);

}

21. Enter the following statements inside the try block:

Class.*forName*("com.mysql.jdbc.Driver");

String URL = "jdbc:mysql://localhost:3306/banking";

conn = DriverManager.*getConnection*(URL, "root", "admin");

22. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'DriverManager'(java.sql) for the DriverManager.

23. Continue entering the following statements inside the try block:

ps = conn.prepareStatement("insert customer values (?, ?)"); String cid = request.getParameter("cid");

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

ps.setString(1, cid);

ps.setString(2, cname);

ps.executeUpdate();

out.println("<center><h3>Customer Details Added</h3></center>");

ps.close();

conn.close();

24. Right Click inside the Code Window of CustomerInfoAdd.html.

25. Select Run As Æ Run on Server.

26. Select the Tomcat v7.0 Server at localhost.

27. Click Next.

28. Click Finish.

29. It will open a browser window.

30. Enter the Customer Id., name and click Add Details.

31. The records inserted in MySQL database.

32. The full source code for CustomerInfoAdd.html is:

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" ["http://www.w3.org/TR/html4/loose.dtd">](http://www.w3.org/TR/html4/loose.dtd)

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>

<title>Customer Info - Add</title>

</head>

<body>

<form method=*"post"* action=*"CustomerInfoAdd"*>

<center>

<h2>Customer Info - Add</h2>

</center>

<hr>

Customer Id.

<input type=*"text"* name=*"cid"*>

<br> Name

<input type=*"text"* name=*"cname"*>

<br>

<input type=*"submit"* value=*"Add Details"*>

</form>

</body>

</html>

33. The full source code for CustomerInfoAdd.java is:

**import** java.io.IOException; **import** java.io.PrintWriter; **import** java.sql.Connection; **import** java.sql.DriverManager;

**import** java.sql.PreparedStatement;

**import** javax.servlet.ServletException; **import** javax.servlet.annotation.WebServlet; **import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class CustomerInfoAdd

\*/

[@WebServlet("/CustomerInfoAdd")](mailto:@WebServlet)

**public class** CustomerInfoAdd **extends** HttpServlet {

**private static final long** *serialVersionUID* = 1L; Connection conn = **null**;

PreparedStatement ps = **null**;

/\*\*

\* [**@see** HttpServlet#doPost(HttpServletRequest request, HttpServletResponse](mailto:@see)

response)

\*/

**protected void** doPost(HttpServletRequest request, HttpServletResponse response)

**throws** ServletException, IOException {

// **TODO** Auto-generated method stub response.setContentType("text/html"); PrintWriter out = response.getWriter(); **try**

{

Class.*forName*("com.mysql.jdbc.Driver");

String URL = "jdbc:mysql://localhost:3306/banking";

conn = DriverManager.*getConnection*(URL, "root", "admin");

ps = conn.prepareStatement("insert customer values (?, ?)"); String cid = request.getParameter("cid");

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

ps.setString(1, cid);

ps.setString(2, cname);

ps.executeUpdate();

out.println("<center><h3>Customer Details Added</h3></center>");

ps.close();

conn.close();

}

**catch**(Exception e)

{

out.println(e);

}

}

}

**Servlet – MySQL – Connectivity**

**Inserting Account Information**

1. Select Banking Project in the Package Explorer (available in the left hand side of the window).

2. Right Click Æ New Æ HTML File.

3. Enter the File name as AccountInfoAdd.

4. Click Next.

5. Click Finish.

6. Change the title as Account Info - Add.

7. Enter the following code inside the body tag:

<form method=*"post"* action=*"AccountInfoAdd"*>

<center>

<h2>Account Info - Add</h2>

</center>

<hr>

Account No.

<input type=*"text"* name=*"ano"*>

<br> Type

<input type=*"text"* name=*"atype"*>

<br>

Balance

<input type=*"text"* name=*"balance"*>

<br>

Customer id.

<input type=*"text"* name=*"cid"*>

<br>

<input type=*"submit"* value=*"Add Details"*>

</form>

8. Select Banking Project in the Package Explorer (available in the left hand side of the window).

9. Right Click Æ New Æ Servlet.

10. Enter the Class name as AccountInfoAdd.

11. Click Next.

12. Click Next.

13. Uncheck the Constructors from superclass option.

14. Uncheck the doGet option.

15. Click Finish.

16. Enter the following code above the doPost method:

Connection conn = **null**; PreparedStatement ps = **null**;

17. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'Connection'(java.sql) for the Connection.

Import 'PreparedStatement'(java.sql) for the PreparedStatement.

18. Simply copy the code available in the doPost() method of CustomerInfoAdd.java and paste inside the doPost() method of AccountInfoAdd.java.

19. Remove the warnings by click into the x mark in the left hand side and choose the following options: Import 'PrintWriter'(java.io) for the PrintWriter.

20. Do the following modifications in the code:

ps = conn.prepareStatement("insert into account values (?, ?, ?, ?)"); String ano = request.getParameter("ano");

String atype = request.getParameter("atype"); String balance = request.getParameter("balance"); String cid = request.getParameter("cid"); ps.setString(1, ano);

ps.setString(2, atype); ps.setString(3, balance); ps.setString(4, cid); ps.executeUpdate();

out.println("<center><h3>Account Details Added</h3></center>");

ps.close();

conn.close();

21. Right Click inside the Code Window of AccountInfoAdd.html.

22. Select Run As Æ Run on Server.

23. Select the Tomcat v7.0 Server at localhost.

24. Click Next.

25. Click Finish.

26. It will open a browser window.

27. Enter the Account No., type, balance, Customer Id. and click Add Details.

28. The records inserted in MySQL database.

29. The full source code for AccountInfoAdd.html is:

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" ["http://www.w3.org/TR/html4/loose.dtd">](http://www.w3.org/TR/html4/loose.dtd)

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>

<title>Account Info - Add</title>

</head>

<body>

<form method=*"post"* action=*"AccountInfoAdd"*>

<center>

<h2>Account Info - Add</h2>

</center>

<hr>

Account No.

<input type=*"text"* name=*"ano"*>

<br> Type

<input type=*"text"* name=*"atype"*>

<br>

Balance

<input type=*"text"* name=*"balance"*>

<br>

Customer id.

<input type=*"text"* name=*"cid"*>

<br>

<input type=*"submit"* value=*"Add Details"*>

</form>

</body>

</html>

30. The full source code for AccountInfoAdd.java is:

**import** java.io.IOException; **import** java.io.PrintWriter; **import** java.sql.Connection; **import** java.sql.DriverManager;

**import** java.sql.PreparedStatement;

**import** javax.servlet.ServletException; **import** javax.servlet.annotation.WebServlet; **import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class AccountInfoAdd

\*/

[@WebServlet("/AccountInfoAdd")](mailto:@WebServlet)

**public class** AccountInfoAdd **extends** HttpServlet {

**private static final long** *serialVersionUID* = 1L; Connection conn = **null**;

PreparedStatement ps = **null**;

/\*\*

\* [**@see** HttpServlet#doPost(HttpServletRequest request, HttpServletResponse](mailto:@see)

response)

\*/

**protected void** doPost(HttpServletRequest request, HttpServletResponse response)

**throws** ServletException, IOException {

// **TODO** Auto-generated method stub response.setContentType("text/html"); PrintWriter out = response.getWriter(); **try**

{

Class.*forName*("com.mysql.jdbc.Driver");

String URL = "jdbc:mysql://localhost:3306/banking";

conn = DriverManager.*getConnection*(URL, "root", "admin");

ps = conn.prepareStatement("insert into account values (?,?,?,?)"); String ano = request.getParameter("ano");

String atype = request.getParameter("atype"); String balance = request.getParameter("balance"); String cid = request.getParameter("cid"); ps.setString(1, ano);

ps.setString(2, atype); ps.setString(3, balance); ps.setString(4, cid); ps.executeUpdate();

out.println("<center><h3>Account Details Added</h3></center>");

ps.close();

conn.close();

}

**catch**(Exception e)

{

out.println(e);

}

}

}

