

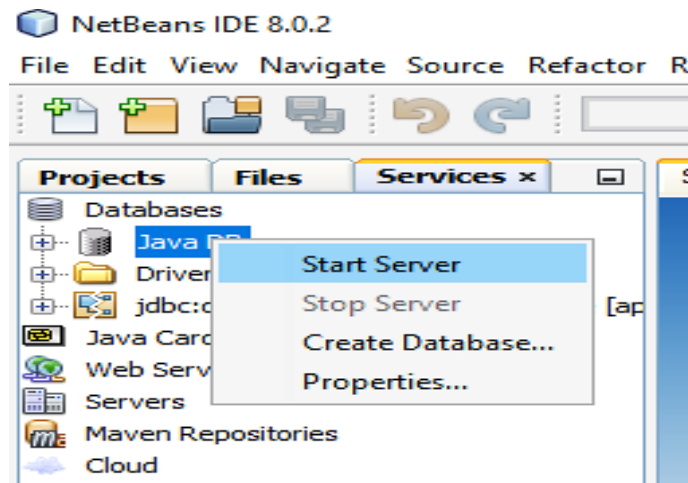
PRACTICAL-5

Aim: Define a web service method that returns the contents of a database in aJSON string. The contents should be displayed in a tabular format.

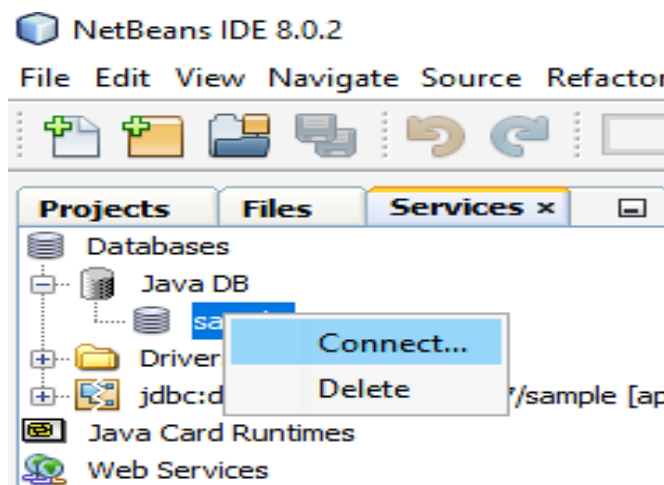
1. Click on Window menu and click on **Projects, Files & Services** to open it.



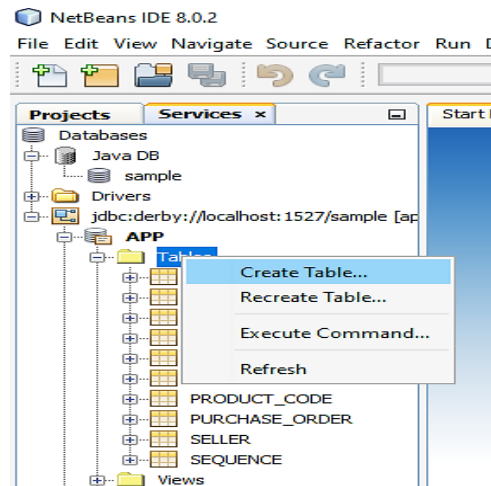
2. Right click on Java DB and then click on Start Server to start the server.



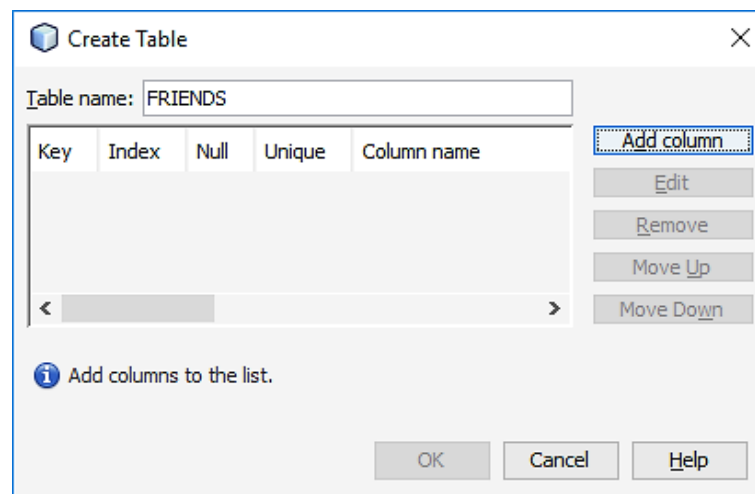
3. Now expand Java DB and **right click on sample** and then **click on connect** to connect the sample database with server.



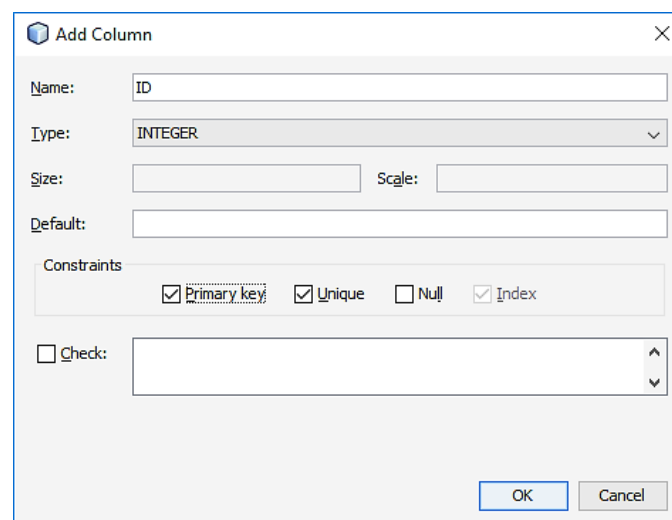
4. Now we are going to create a table in default database **sample**. **Right click on Table -> Create Table**



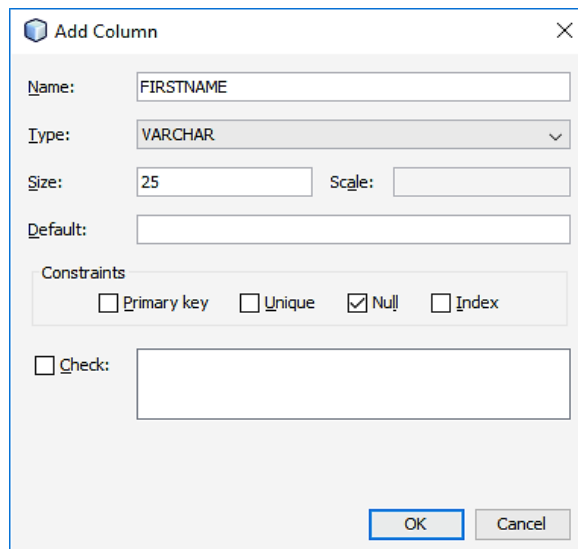
5. Give **table name** as **FRIENDS**.



6. Now click on Add column button to add columns in table.
Enter details as in below pic and select Primary key. After that click on OK button.

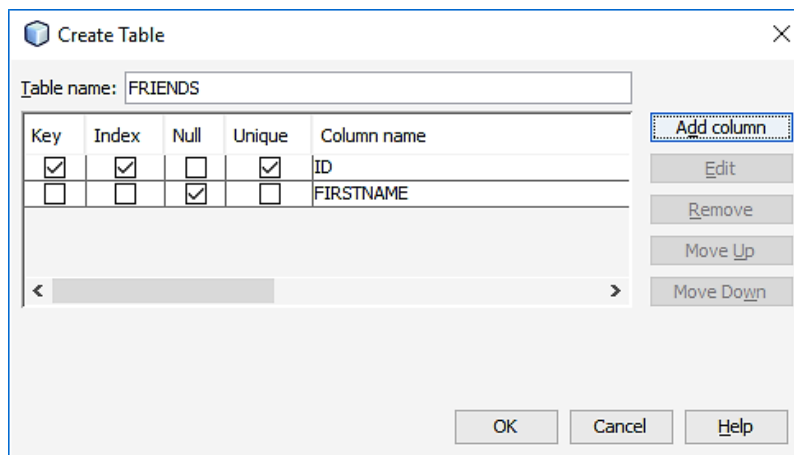


7. Now **add second column** with following detail. But **don't select primary** and click on OK button



The 'Add Column' dialog box is shown. It has a title bar with a close button. The fields are: Name: FIRSTNAME, Type: VARCHAR (dropdown), Size: 25, Scale: (empty), Default: (empty). Under Constraints, there are checkboxes for Primary key, Unique, Null (checked), and Index. There is also a 'Check' checkbox and a text area. At the bottom are OK and Cancel buttons.

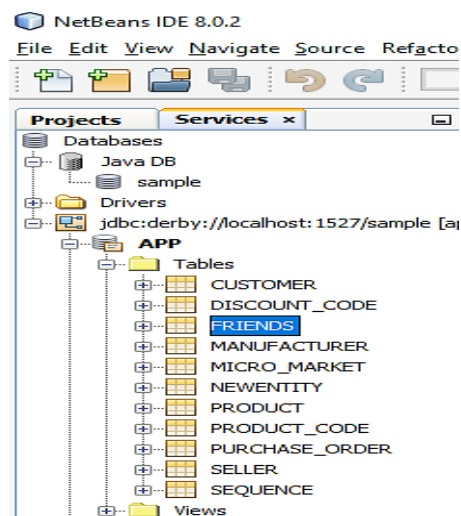
8. Now click on OK button.



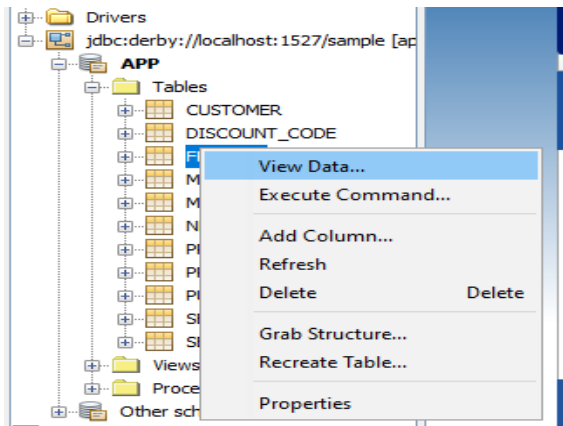
The 'Create Table' dialog box is shown. It has a title bar with a close button. The 'Table name' field contains 'FRIENDS'. Below it is a table with columns: Key, Index, Null, Unique, and Column name. The table has two rows: ID (Key: checked, Index: checked, Null: unchecked, Unique: checked) and FIRSTNAME (Key: unchecked, Index: unchecked, Null: checked, Unique: unchecked). To the right of the table are buttons: Add column, Edit, Remove, Move Up, and Move Down. At the bottom are OK, Cancel, and Help buttons.

| Key | Index | Null | Unique | Column name |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ID |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | FIRSTNAME |

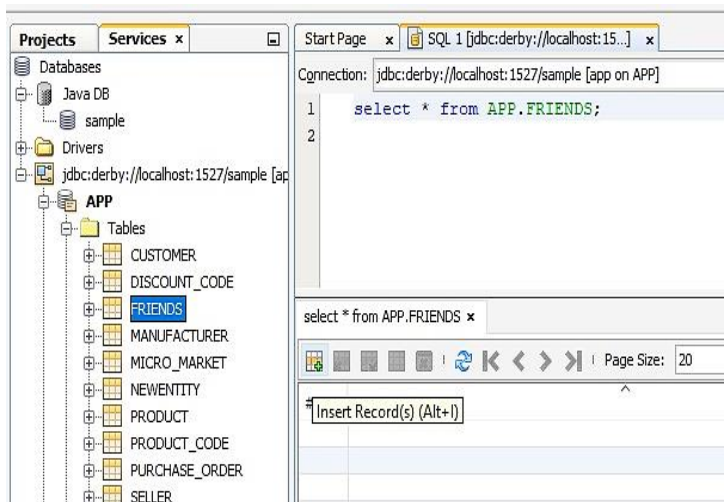
9. Now you can see a table with name **FRIENDS** in the table



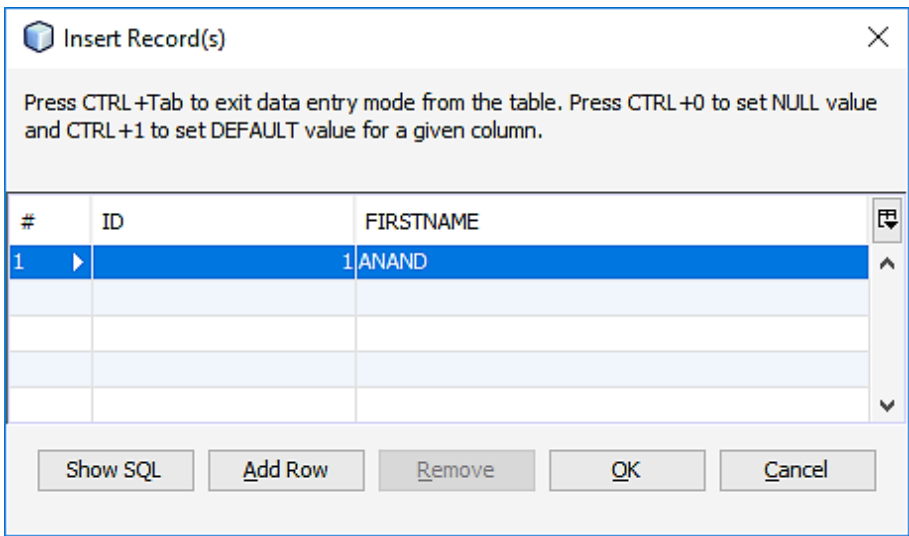
10. Right click on FRIENDS to view and add records into it.



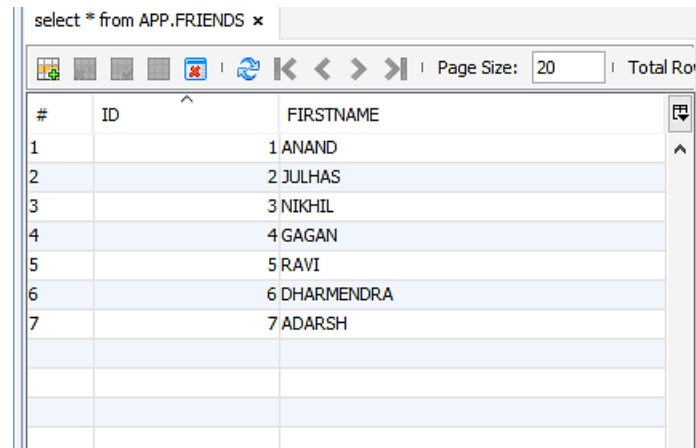
11. Now click on the leftmost icon in second panel to insert some record.



12. Insert a record and then click on Add Row button to insert more record.After that click on OK button to finish.



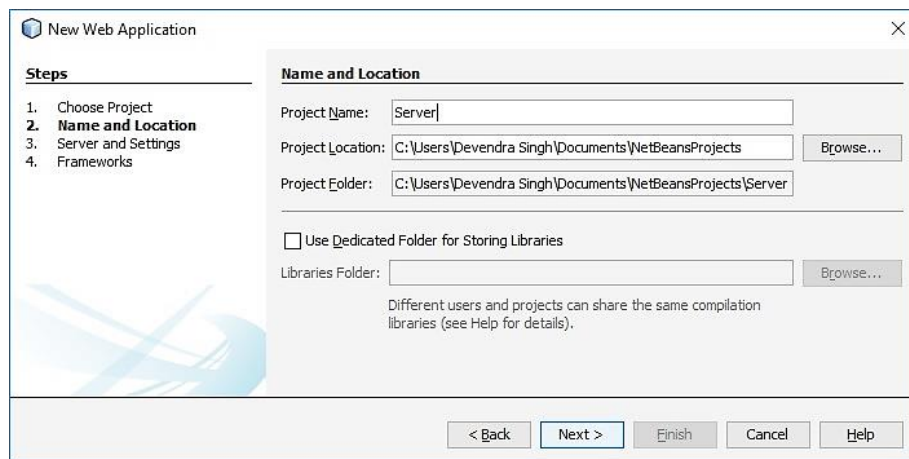
13. As you can see, I have entered 7 records.



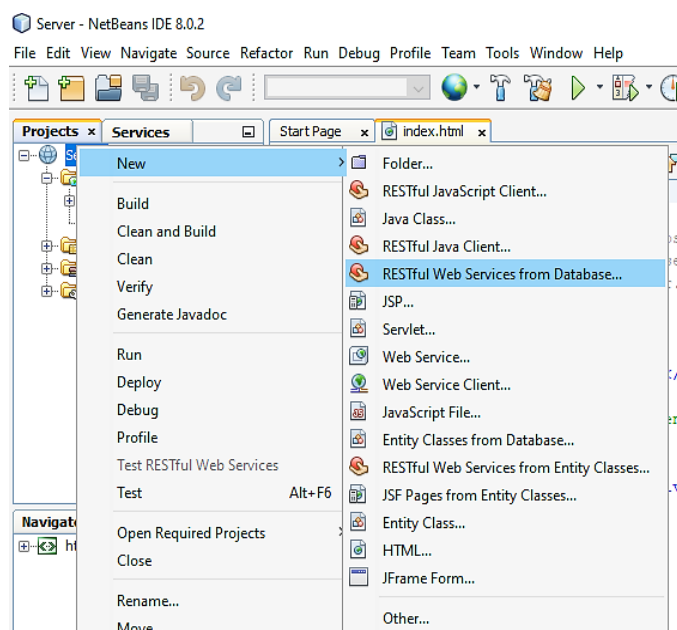
The screenshot shows a database query result window with the title "select * from APP.FRIENDS x". The window includes a toolbar with icons for grid, table, and other views, along with navigation arrows and a "Page Size" dropdown set to 20. The main area displays a table with 3 columns: "#", "ID", and "FIRSTNAME". There are 7 rows of data, each with a blue background.

| # | ID | FIRSTNAME |
|---|----|--------------|
| 1 | | 1 ANAND |
| 2 | | 2 JULHAS |
| 3 | | 3 NIKHIL |
| 4 | | 4 GAGAN |
| 5 | | 5 RAVI |
| 6 | | 6 DHARMENDRA |
| 7 | | 7 ADARSH |

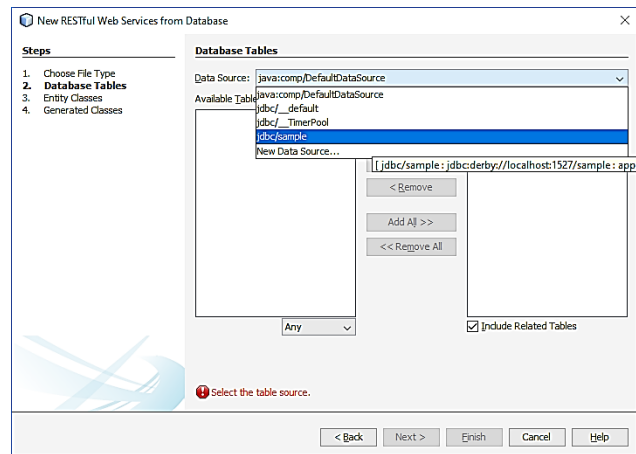
14. Now create a web application with name Server. After that click on Next and then Finish button.



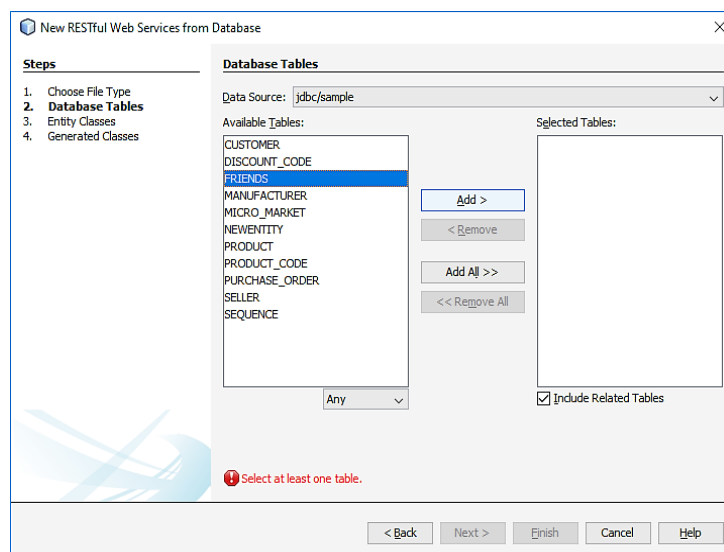
15. Now create a RESTful Web Service from Database by right click on project name.



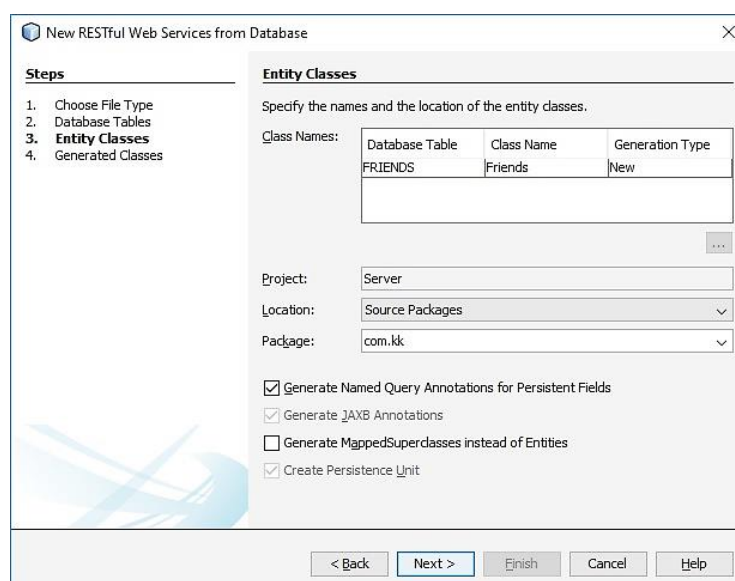
16. Choose Data Source jdbc/sample.



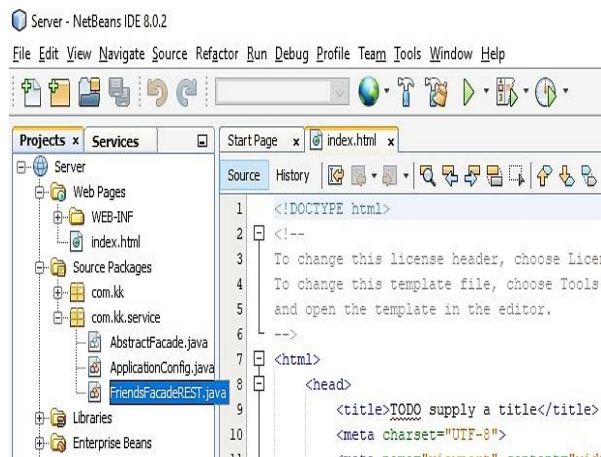
17. Now select FRIENDS and click on Add button. After that click on Next button.



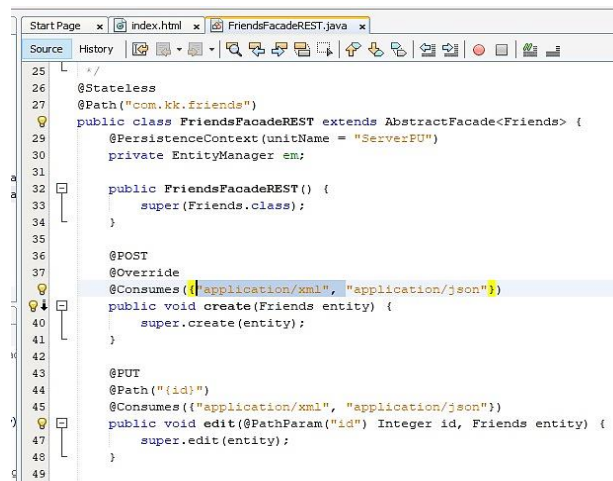
18. Enter Package name as com.kk and click on Next button and then Finish



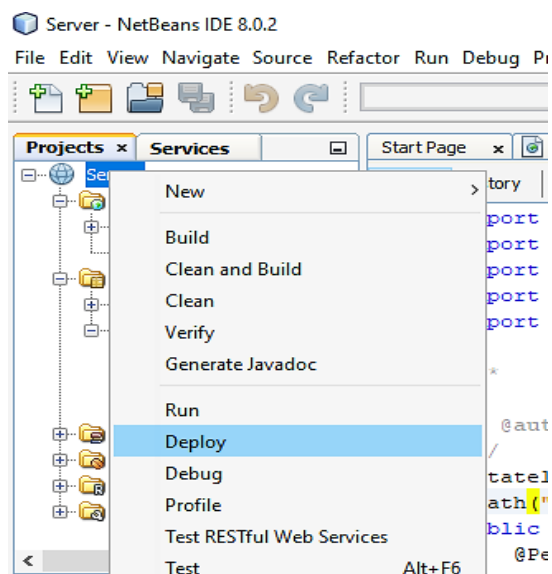
19. Now open selected file by double click on it.



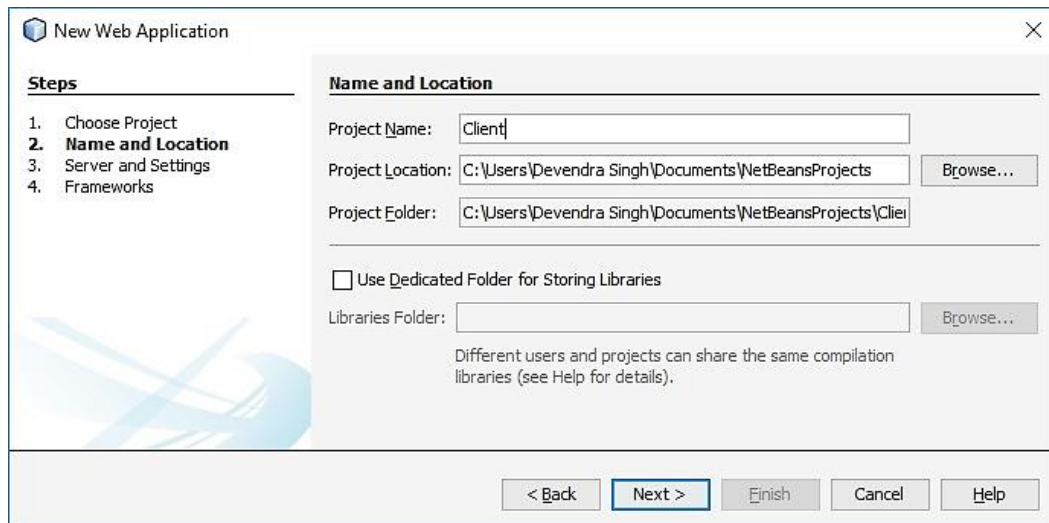
20. Now **remove the selected part from every method in this file**. So that it will communicate only in JSON format. You can also use methods to convert it. But this is easiest method.



21. After that right click on project name and Deploy it.



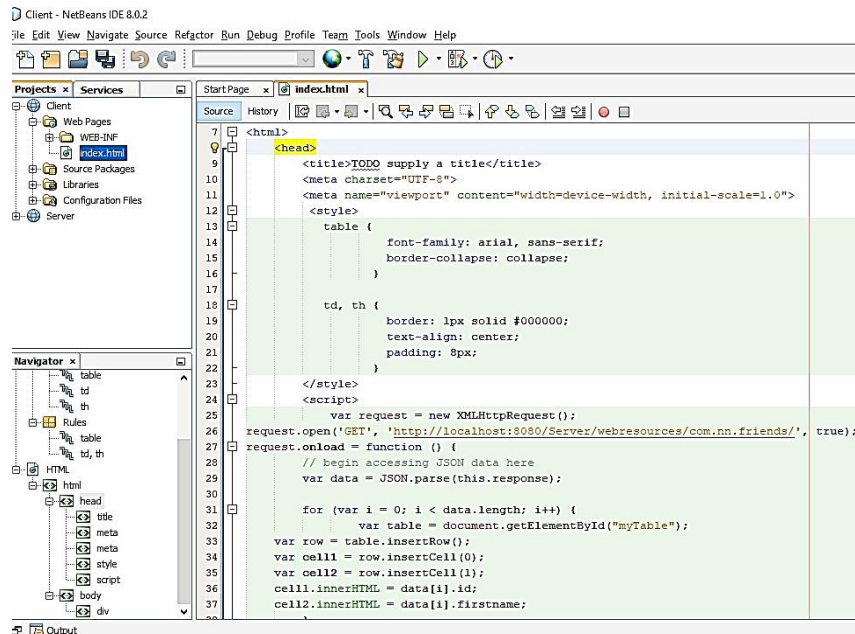
22. Now create one more Web Application as Client. After that click on Next and then Finish button.



23. Now open the index.html file of Client project and add the following code in between HEAD tag.

```
<style>
    table {
        font-family: arial, sans-serif; border-collapse: collapse;
    }
    td, th {
        border: 1px solid #000000; text-align: center; padding: 8px;
    }
</style>
<script>
var request = new XMLHttpRequest();
request.open('GET', 'http://localhost:8080/Server/webresources/com.kk.friends/', true);
request.onload = function ()
{
    // begin accessing JSON data here
    var data = JSON.parse(this.response);
    for (var i = 0; i < data.length; i++) {
        var table = document.getElementById("myTable");
        var row = table.insertRow();
        var cell1 = row.insertCell(0);
        var cell2 = row.insertCell(1);
        cell1.innerHTML = data[i].id;
        cell2.innerHTML = data[i].firstname;
    }
};

request.send();
</script>
```

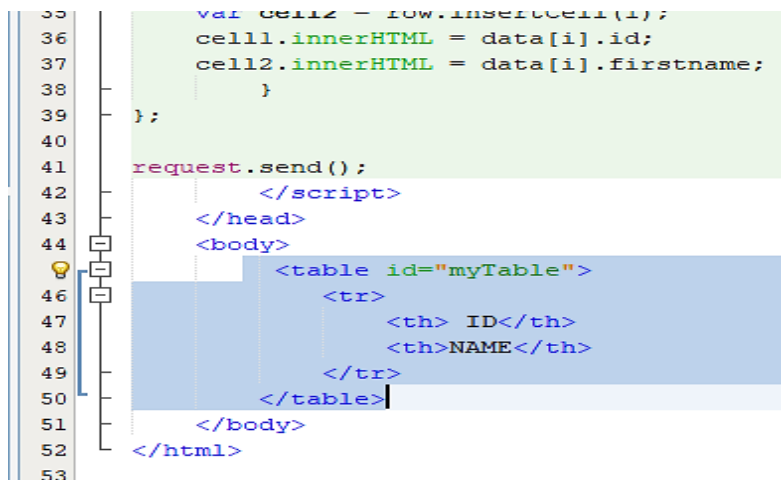
Note:URL is sensitive. It will change accordingly if you have not given the project and file names as of mine.

24. Replace the content of body tag with following code.

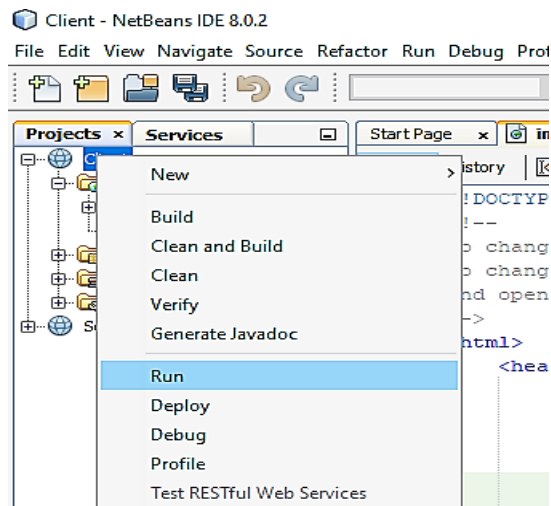
```

<table id="myTable">
    <tr>
        <th> ID</th>
        <th>NAME</th>
    </tr>
</table>

```



25. Now run the Client Web Application.



26. A window will open in browser which represents a data in tabular format. These **data are the records entered in FRIEND table.**

A screenshot of a web browser window. The address bar shows 'http://localhost:8080/Client/'. The browser title is 'TODO supply a title'. The browser has a menu bar with 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. The main content area displays a table with 7 rows and 2 columns. The first row has headers 'ID' and 'NAME'. The subsequent rows contain the following data: (1, ANAND), (2, JULHAS), (3, NIKHIL), (4, GAGAN), (5, RAVI), (6, DHARMENDRA), and (7, ADARSH).

| ID | NAME |
|----|------------|
| 1 | ANAND |
| 2 | JULHAS |
| 3 | NIKHIL |
| 4 | GAGAN |
| 5 | RAVI |
| 6 | DHARMENDRA |
| 7 | ADARSH |