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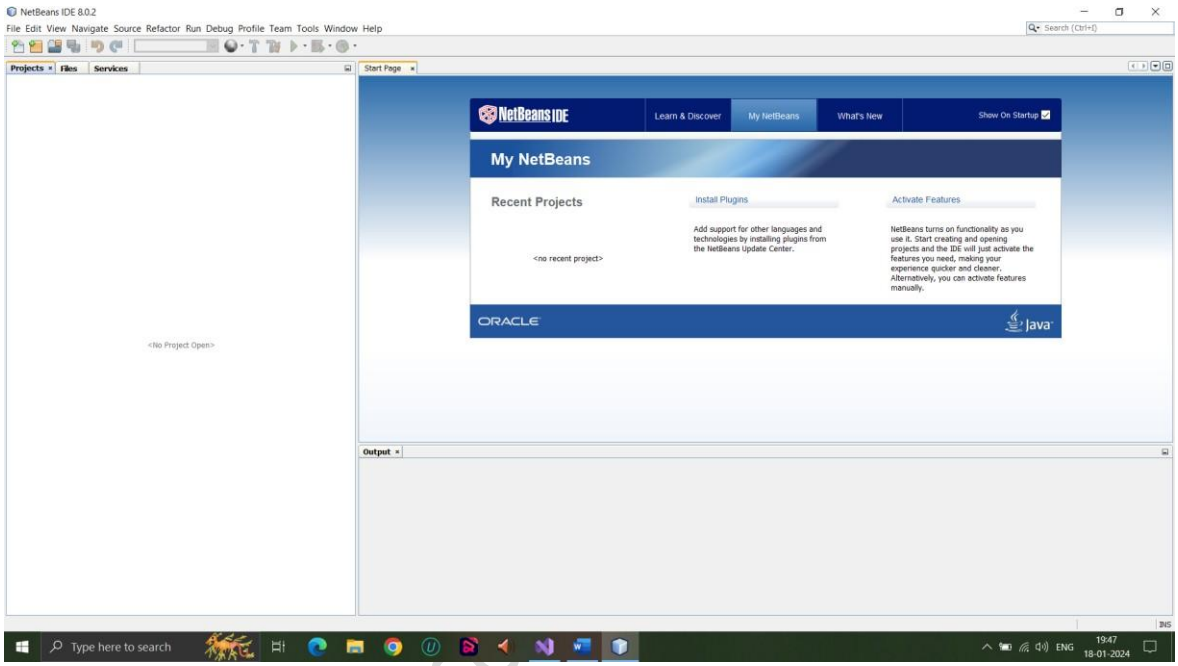
Practical-1

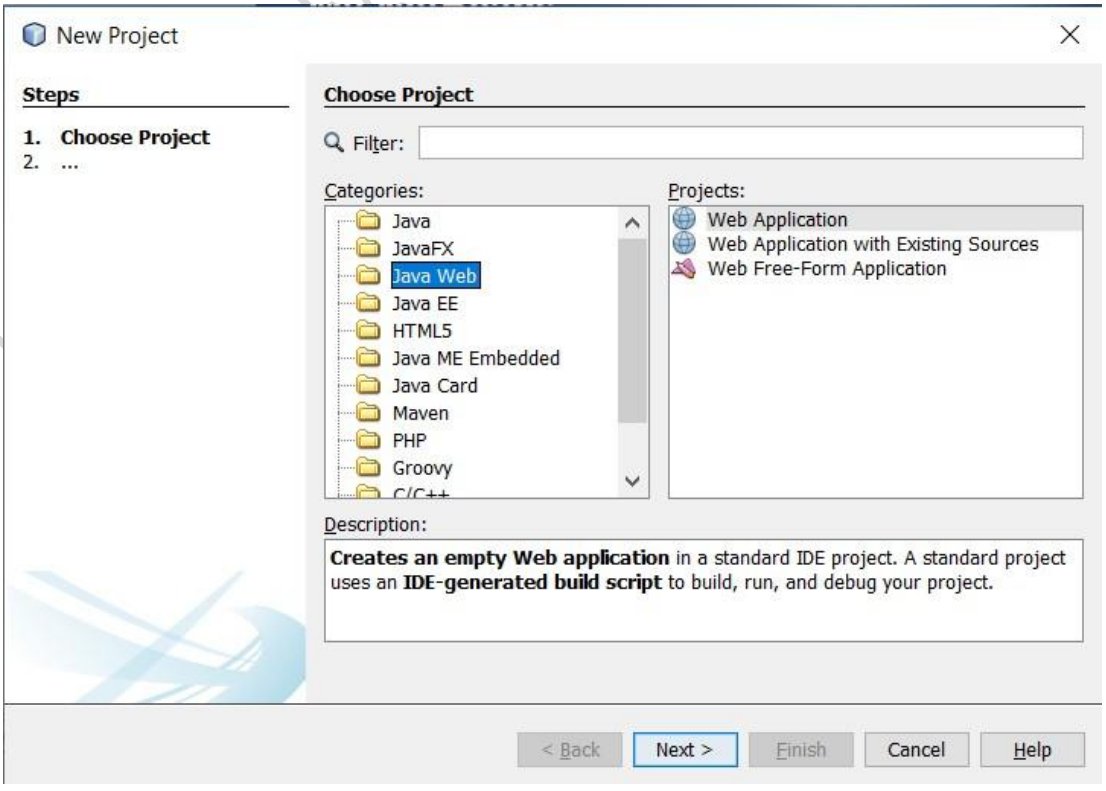
Create a Simple SOAP service.

Steps:

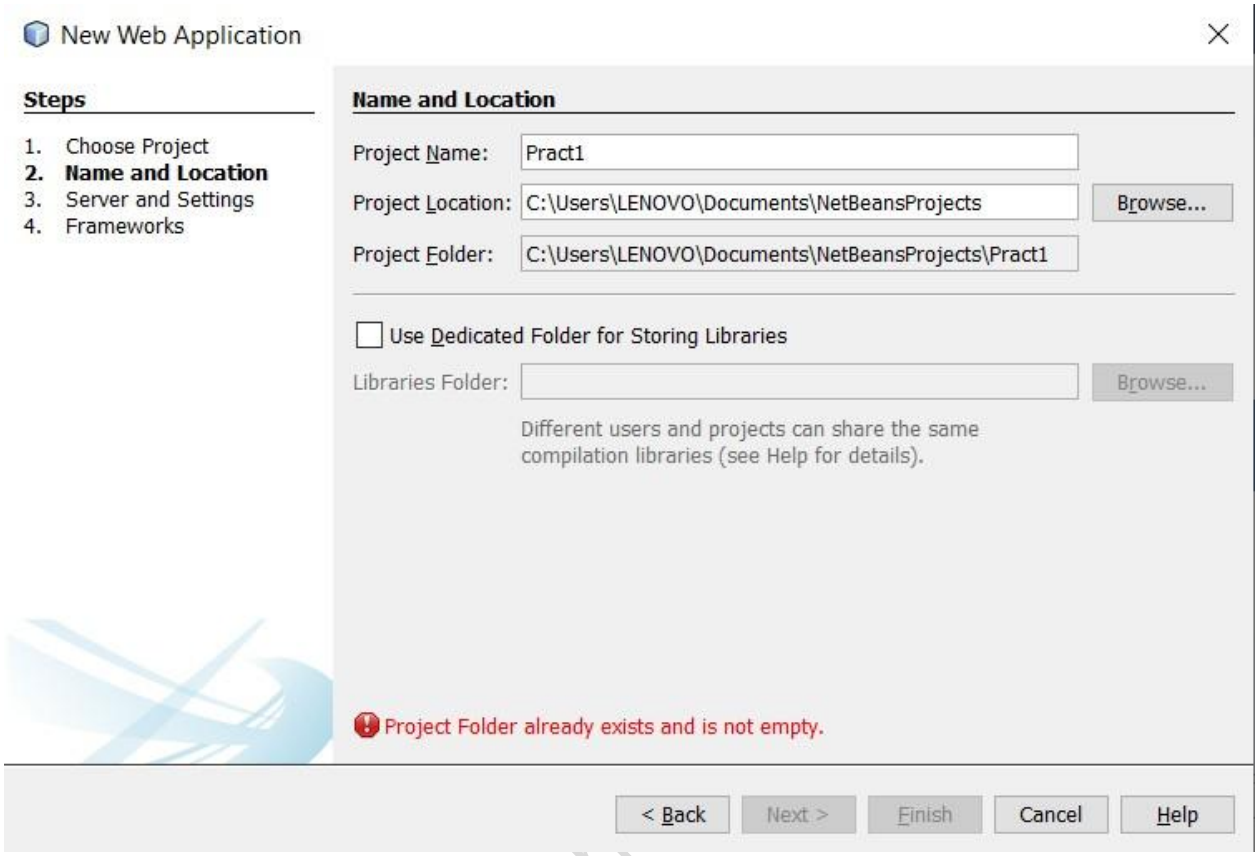
1] Open the NetBeans , and you will get the following screen. Close the start page.



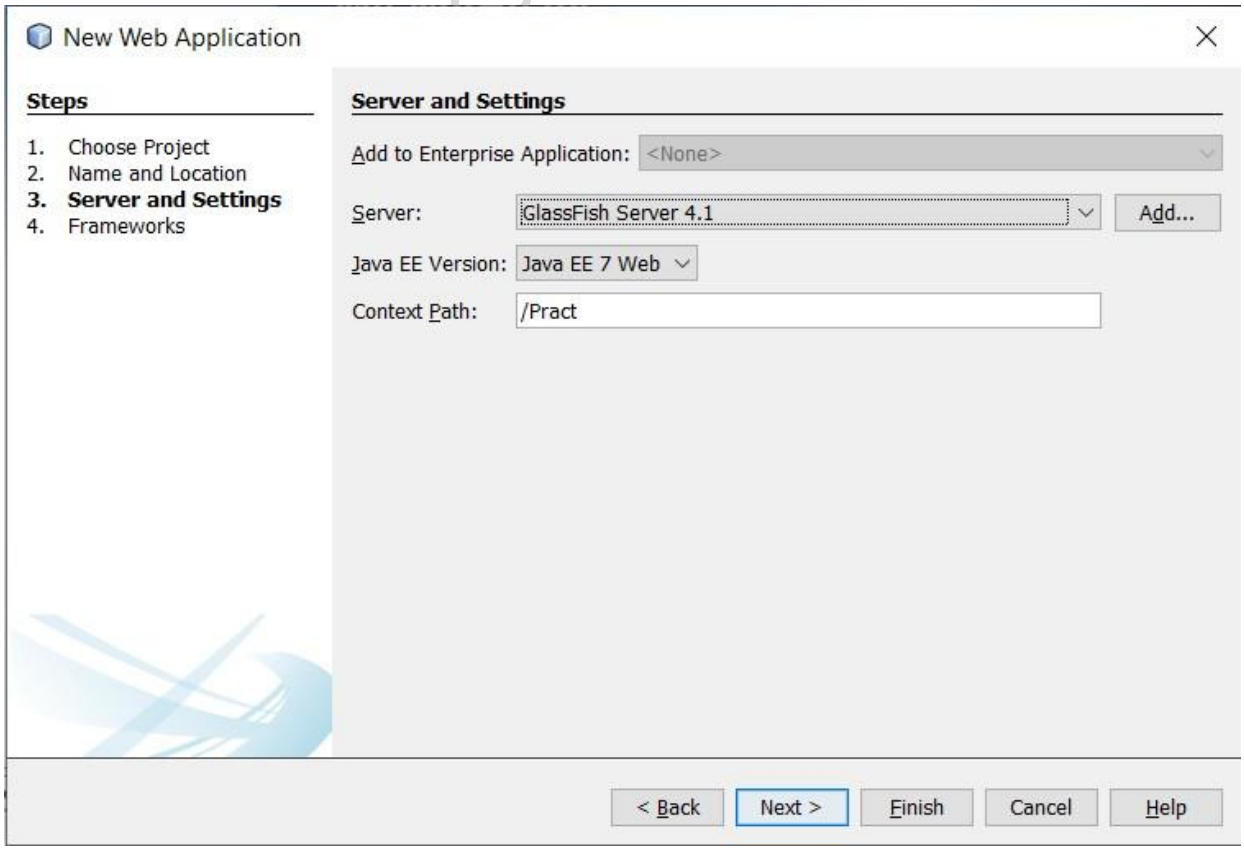
2] Now click on the file tab and click on new project you will get the following screen :



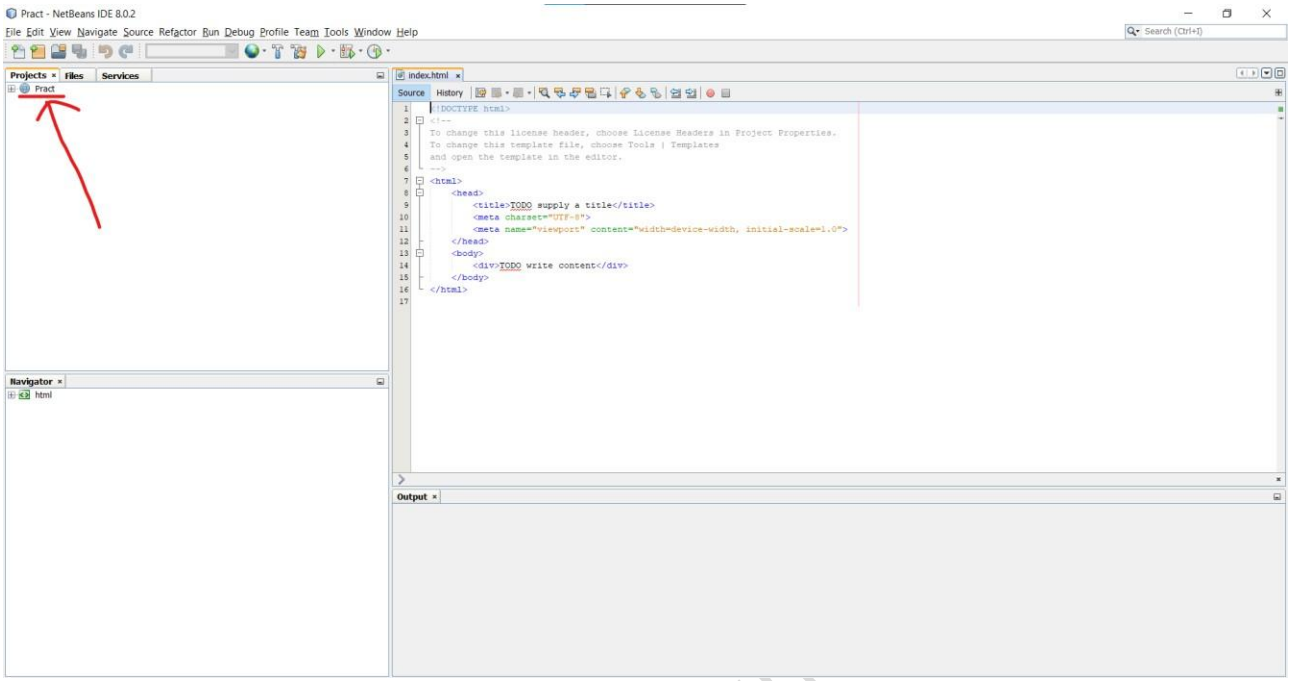
3] In Categories select Java Web and in Projects , Select Web Application .After selecting click onnext . You will get the following window:



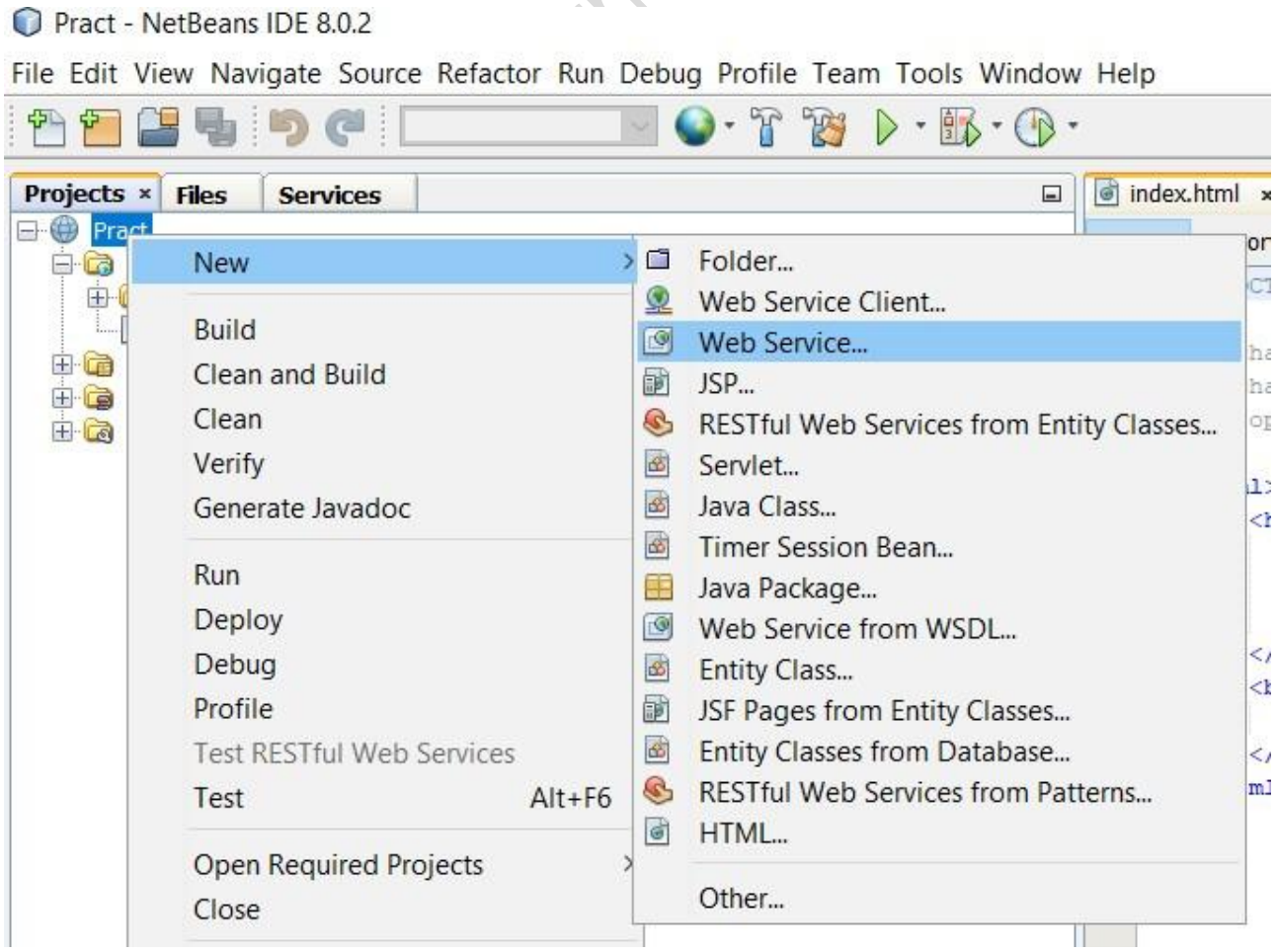
4] Now Give name to the Project Name: , and click on next . you will get the following windowthen . again click on finish:



5] You will get the following screen now carefully see in projects section your recently created project appears double click to expand it:



6] Now Right click on the project and select new and then select Web Service ,As shown Below:



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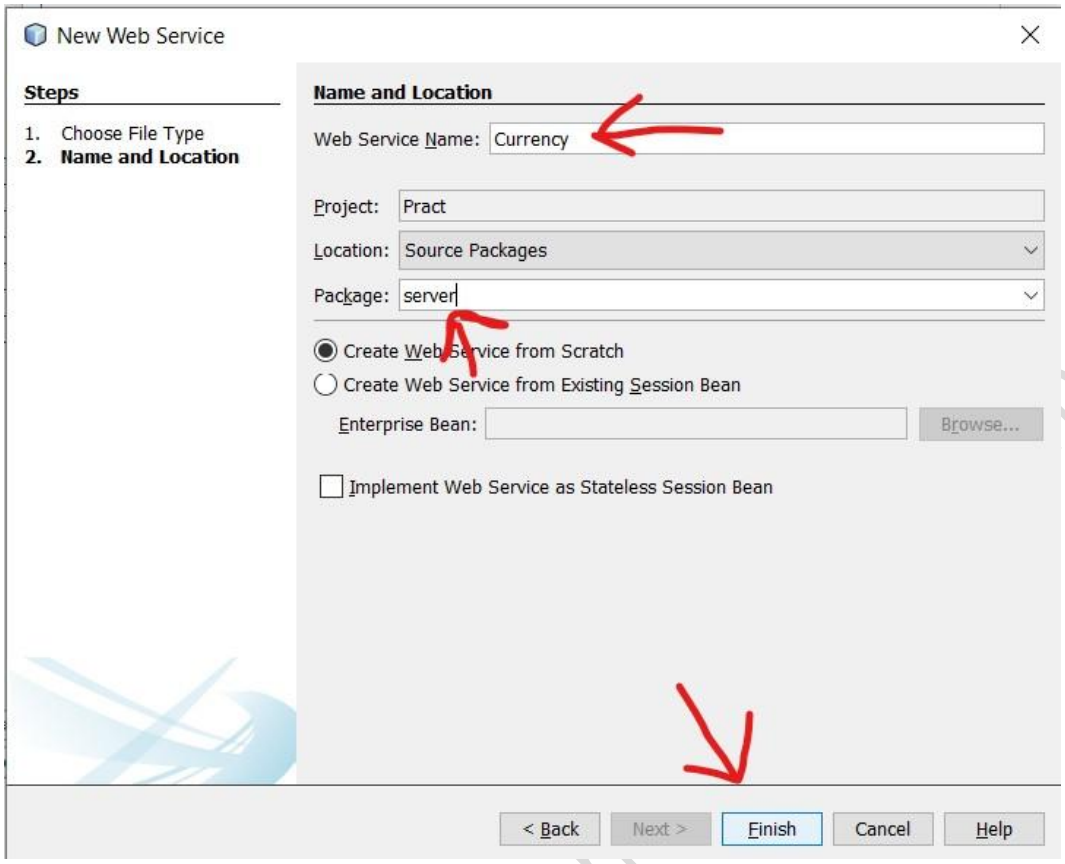
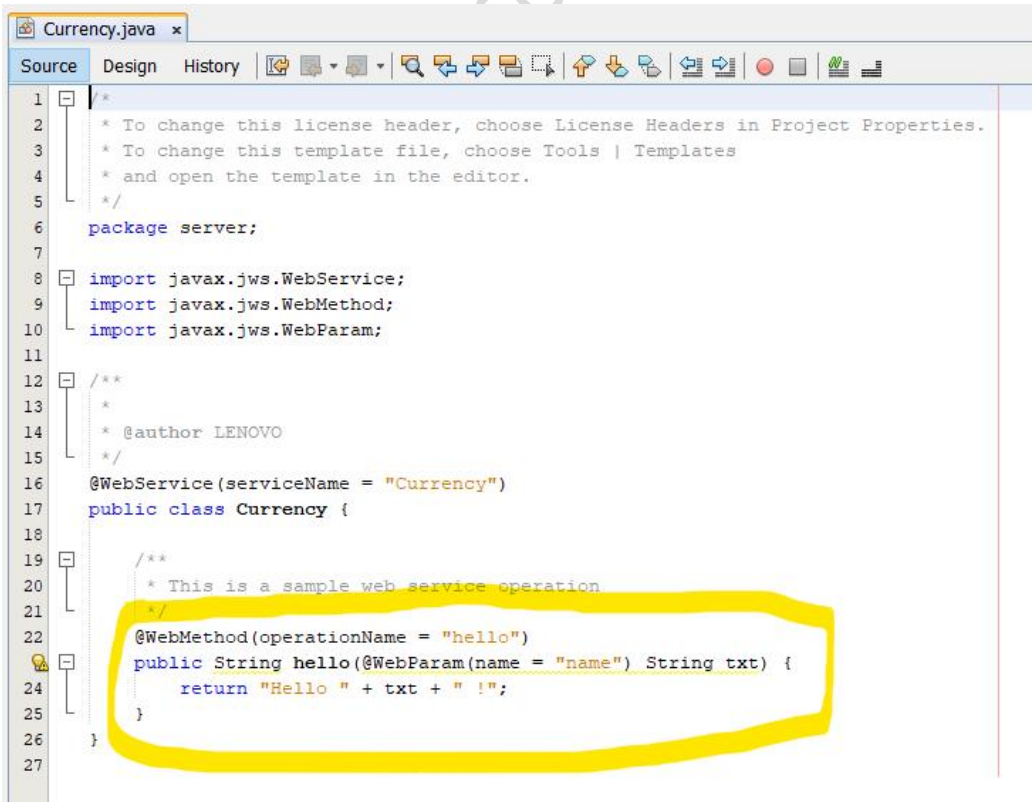
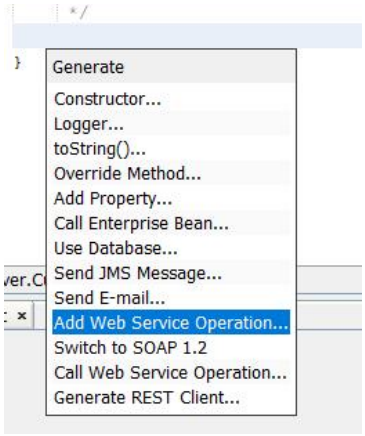
7] after clicking Web Service following window should appear , now give name to web service and give package as “server”. As shown in the image:



After clicking finish you should get the following window erase the mentioned code :

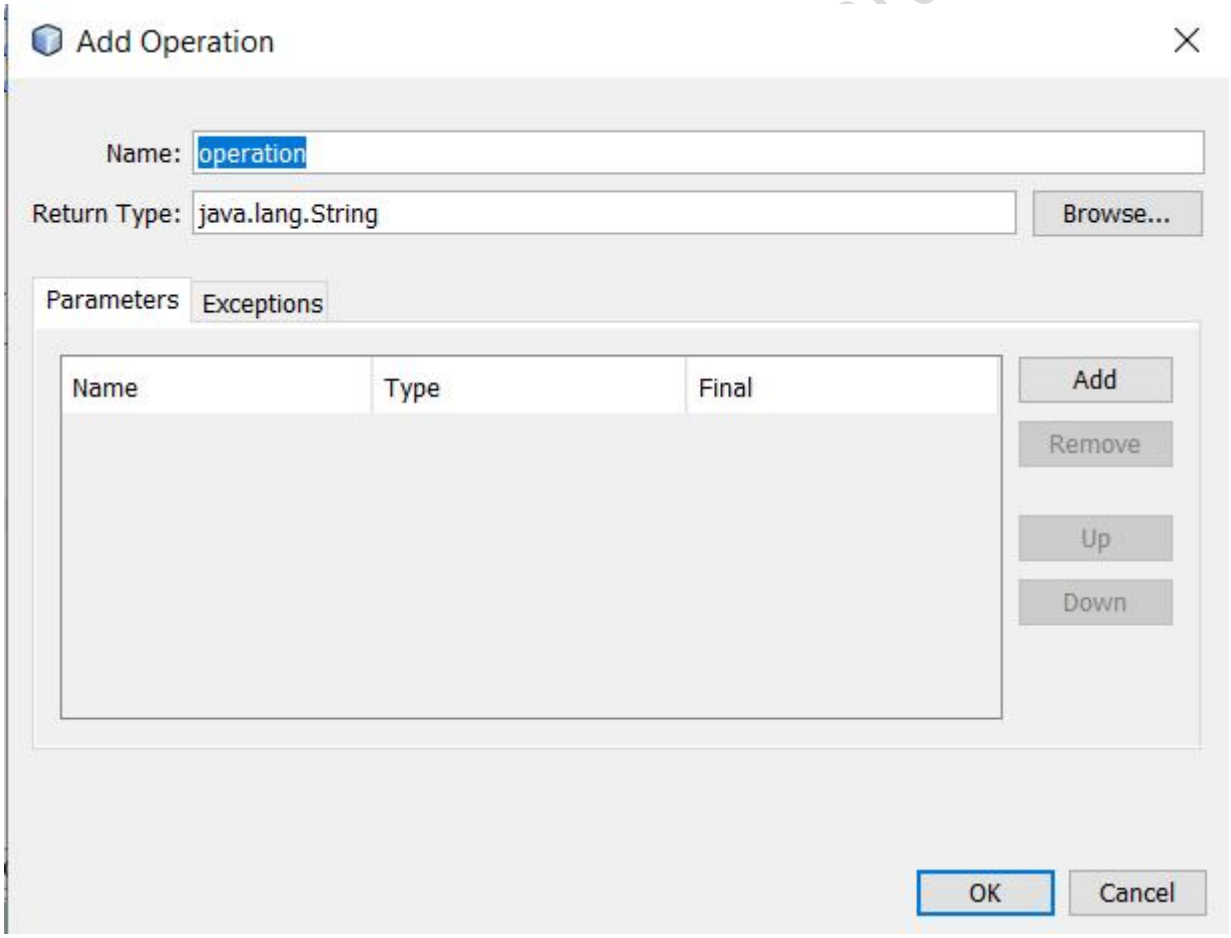


8] Now right click any where and click on insert code and select Add Web Service Operation :



9] the following window would appear :

Just give name to the method or operation and click on add button to add parameters to the method as here we are converting dollar to rupees we should need only one parameter .



10] give the name to the variable select data type as double and click on ok as shown below:

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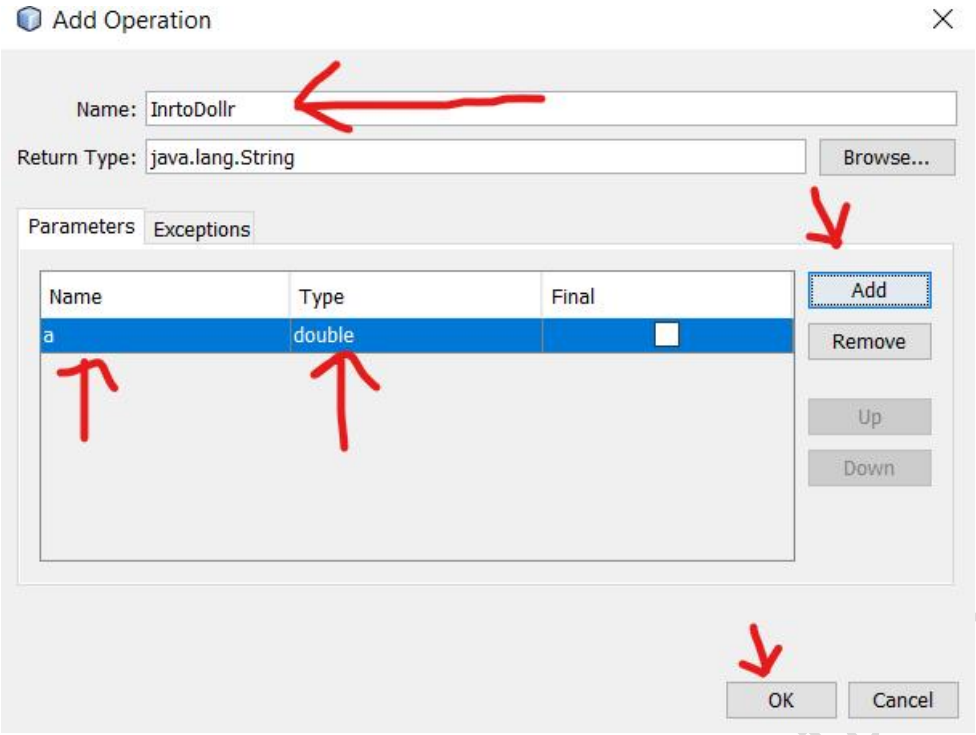
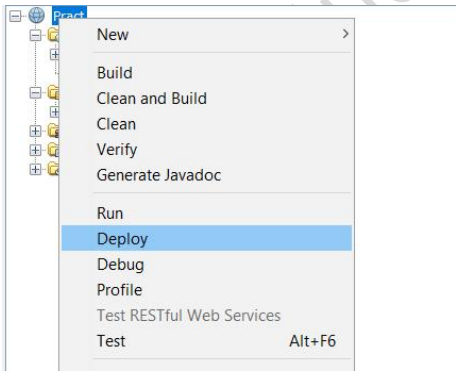


11] After clicking ok code will autogenerate , make changes In that code as mentioned below:

```
@WebMethod(operationName = "InrtoDollar")
public String InrtoDollar(@WebParam(name = "a") double a) {
    //TODO write your implementation code here:
    return "The Indian rupees "+a+" in Dollars is "+(a/83.17);
}
```

12] now our web service is ready now right click on project and click on deploy :



13] now right click on webservice and click on test web service you will get the following output:

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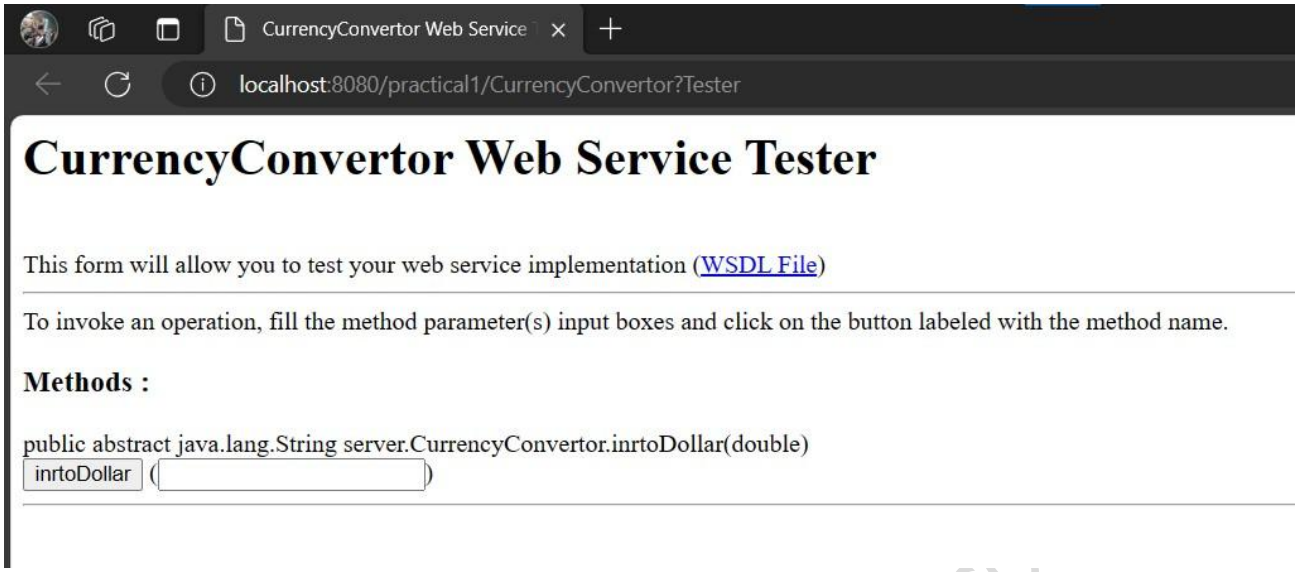
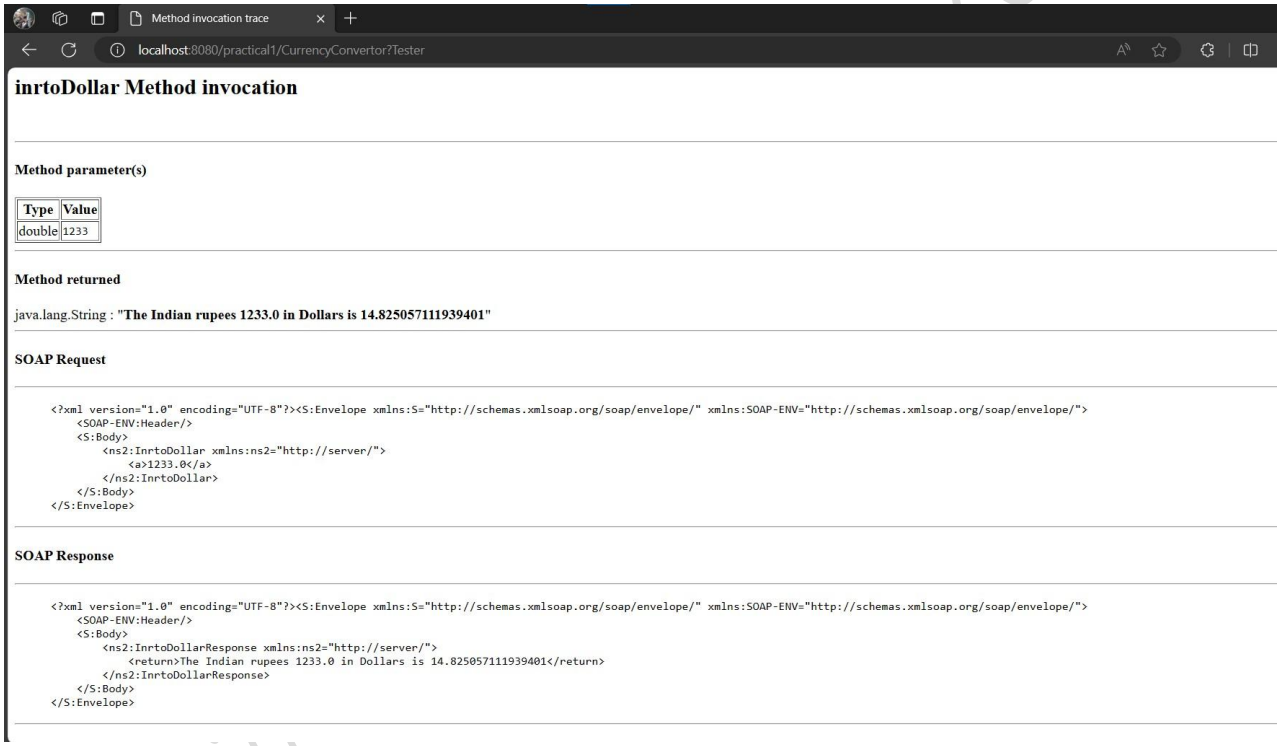
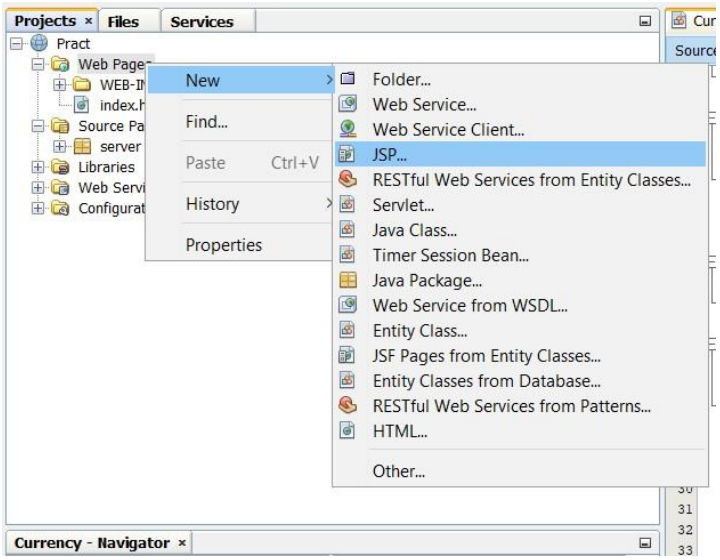




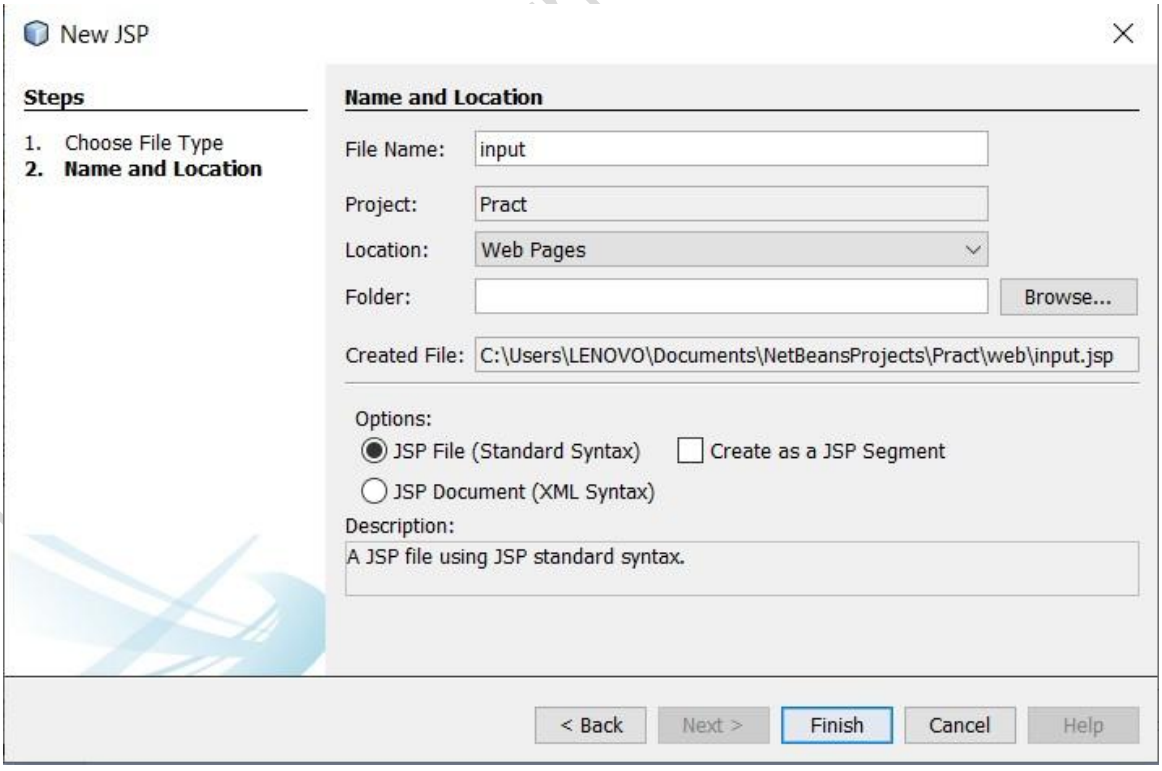
So this is how we created our web service and deployed it.

Creating a java Client using jsp

14] now our web service is successfully deployed. Right click on web pages and select new and select jsp as shown below:



15] give name and click on finish as shown below do it 2 times on for input and one for output:

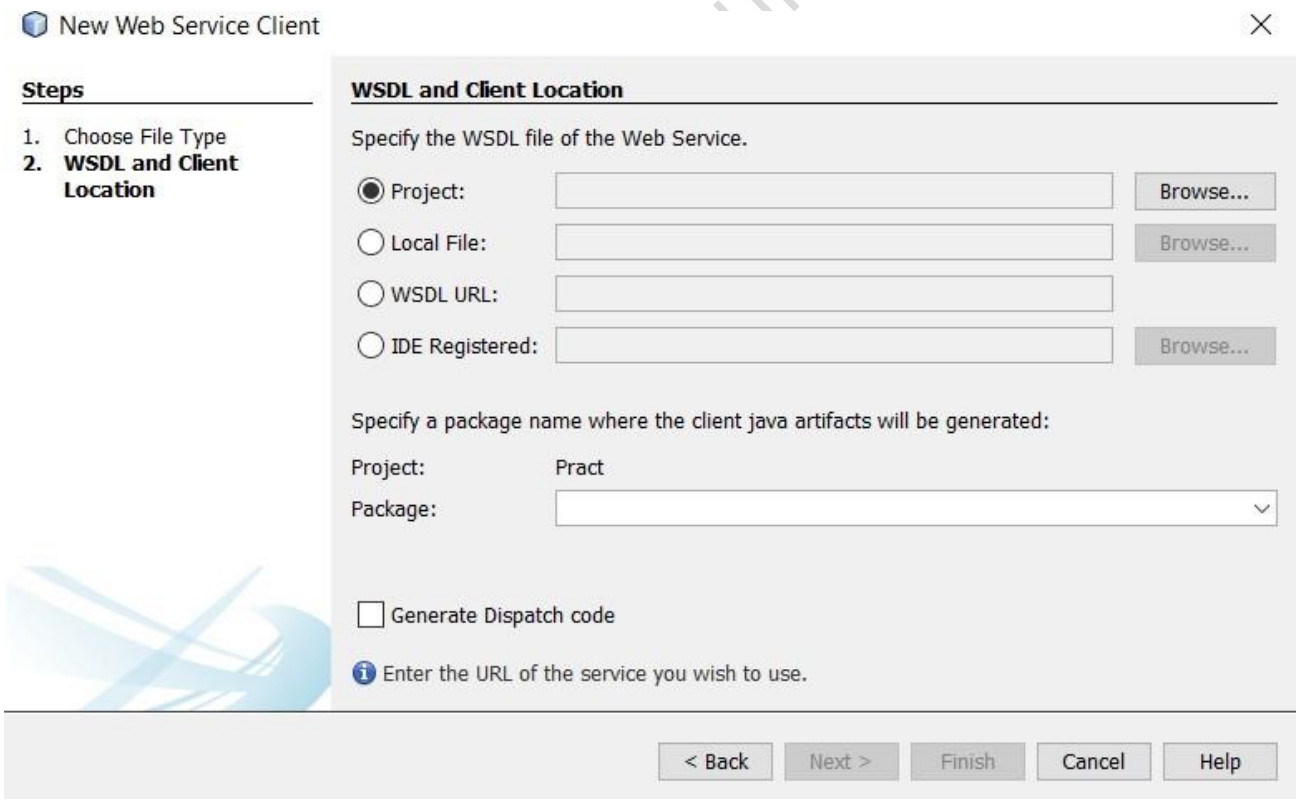


16] In input.jsp create a form for taking user input as shown below:

```
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
        <form action="output.jsp">
            <pre>
                Enter the currency in rupees : <input type="text" name="t1">
                <input type="submit">        <input type="reset">
            </pre>
        </form>
    </body>
</html>
```

In this code set action = the jsp file where u want output and give name to textbox input.

17] now we have to create web service client, for same right click on project and select new then select web service client you will get the following screen:



At this step click on browse and select your project and click ok after clicking ok you will get wsdl url as shown below:

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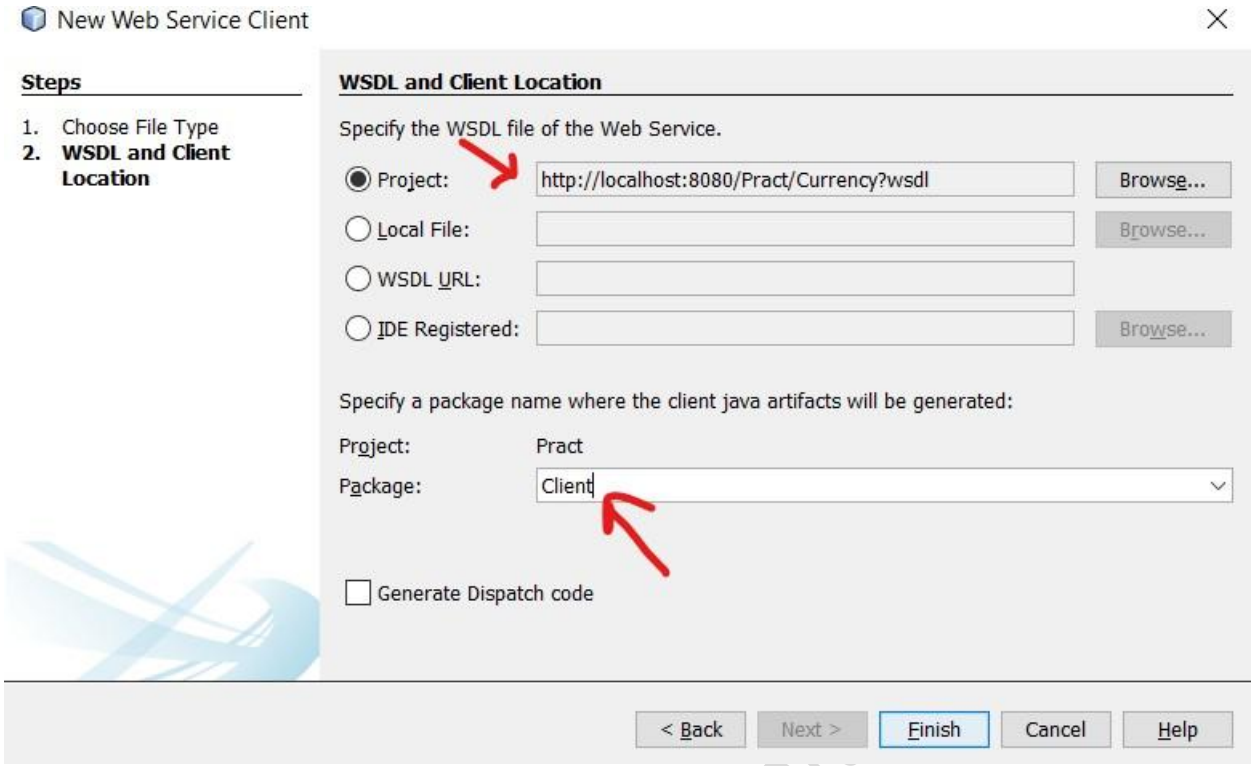
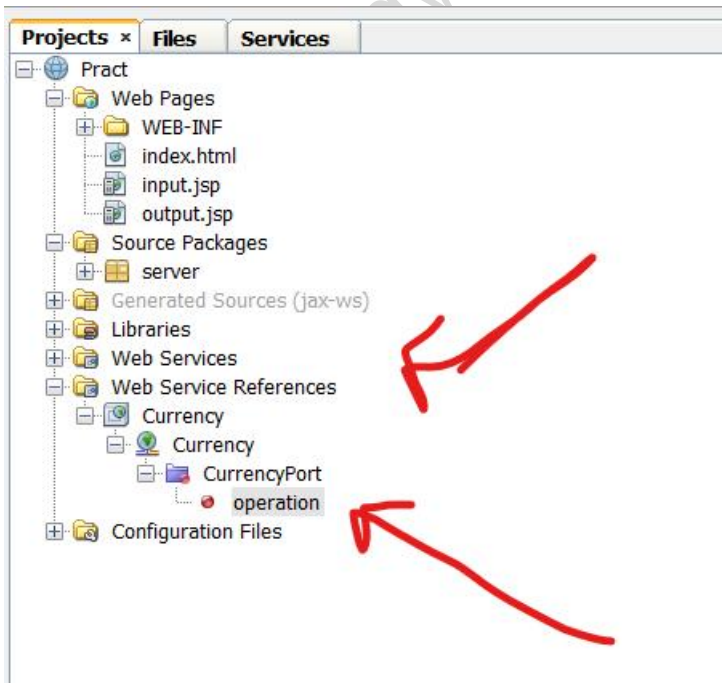


At this stage copy the url and paste it in notepad for future.

Give package name as "Client".

Now click on finish.

18] now in project section you can se a new folder is been created named "web service refrence". double click to expand it you should get the following :



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Hold the operation or your operation name and drag it into the output.jsp in body tag as shown : You will get the following auto generated code:

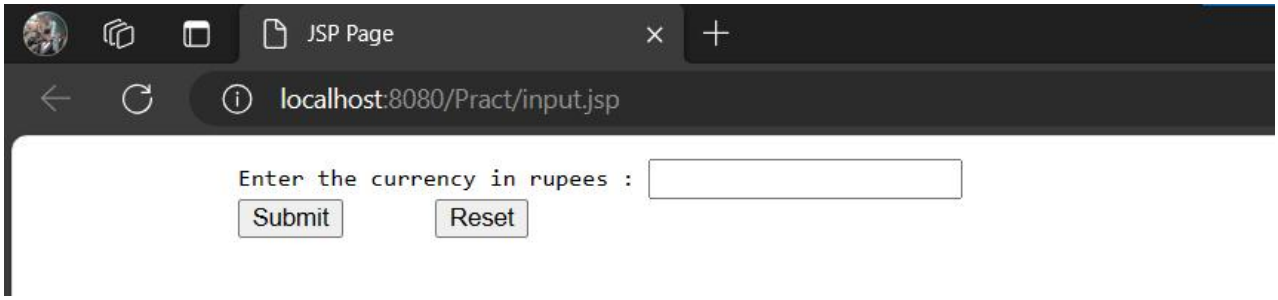
```
<body>
        <%-- start web service invocation --%><hr/>
<%
try {
    Client.Currency_Service service = new Client.Currency_Service();
    Client.Currency port = service.getCurrencyPort();
     // TODO initialize WS operation arguments here
    double a = 0.0d;
    // TODO process result here
    java.lang.String result = port.operation(a);
    out.println("Result = "+result);
} catch (Exception ex) {
    // TODO handle custom exceptions here
}
%>
<%-- end web service invocation --%><hr/>

</body>
```

19] now make changes as shown below in the code:

```
        <%-- start web service invocation --%><hr/>
<%
try {
    Client.Currency_Service service = new Client.Currency_Service();
    Client.Currency port = service.getCurrencyPort();
     // TODO initialize WS operation arguments here
    double a = Double.parseDouble(request.getParameter("t1"));
    // TODO process result here
    java.lang.String result = port.operation(a);
    out.println(result);
} catch (Exception ex) {
    // TODO handle custom exceptions here
}
%>
<%-- end web service invocation --%><hr/>
```

20] now Deploy our project again and right click on input.jsp and click run file you will redirect to a browser page as shown :



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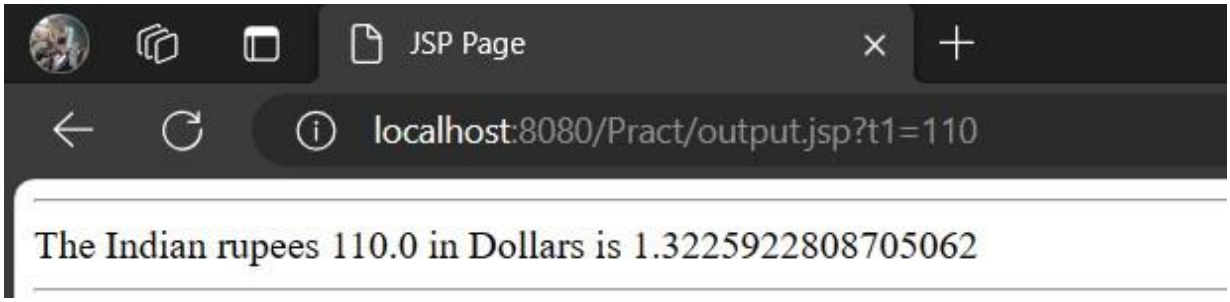
Enter any numerical value in text box and click on submit you will get the following output:



Python client:

1] for consuming java web services in python we should repeat the above steps till step np.19 .

Note: for getting output the project or web service should be deployed .

After doing all of the steps write the following code in python idle:

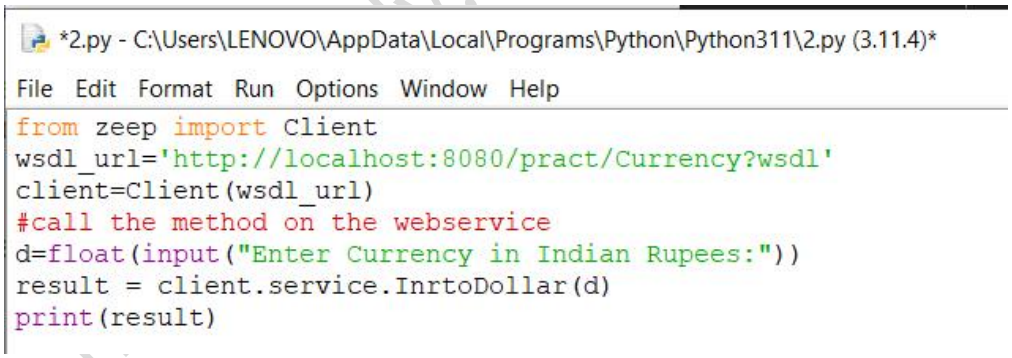
Code :

```
from zeep import Client
wsdl_url='http://localhost:8080/pract/Currency?wsdl'
client=Client(wsdl_url)
#call the method on the webservice
d=float(input("Enter Currency in Indian Rupees:"))
result = client.service.InrtoDollar(d)
print(result)
```

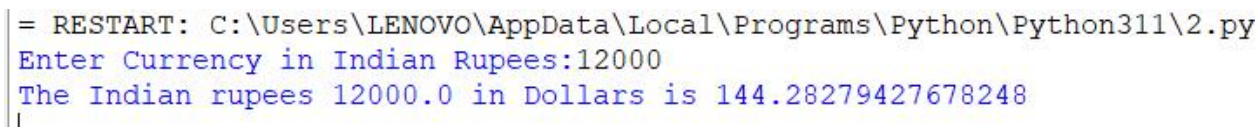
2] replace wsdl_url with the url which was copied at the time of web service client creation .

In step no.17 . and replace the InrtoDollar with your method or operation name. and pass parameter to it

3] final code should look like following:



4] after running the above code you should get the following output:



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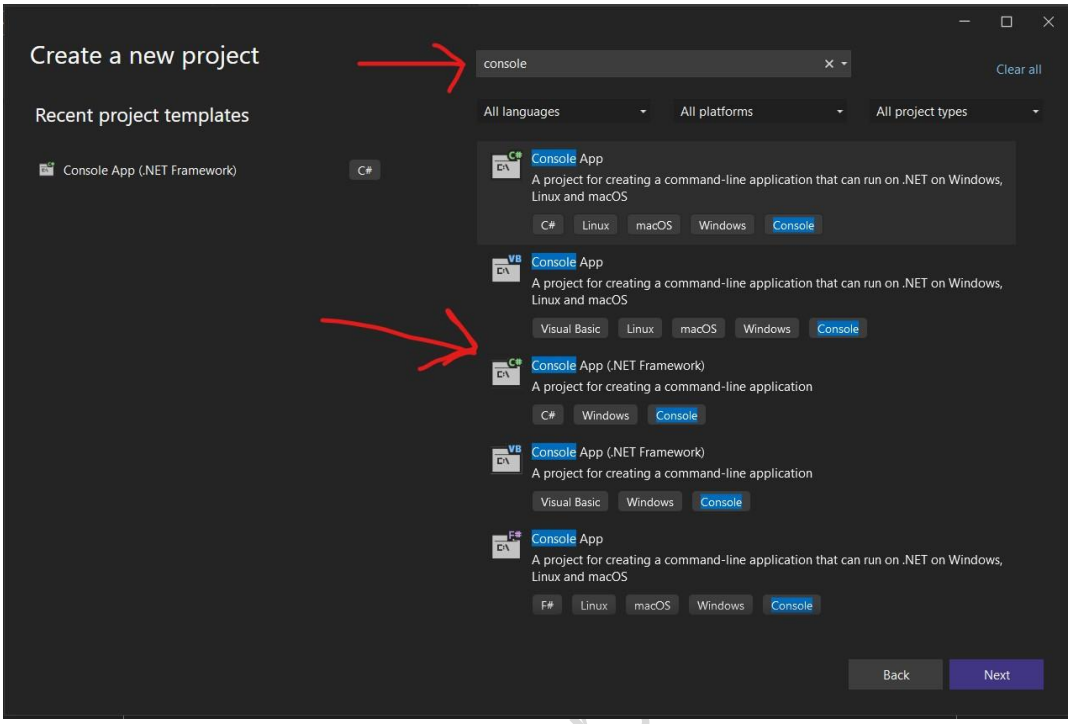
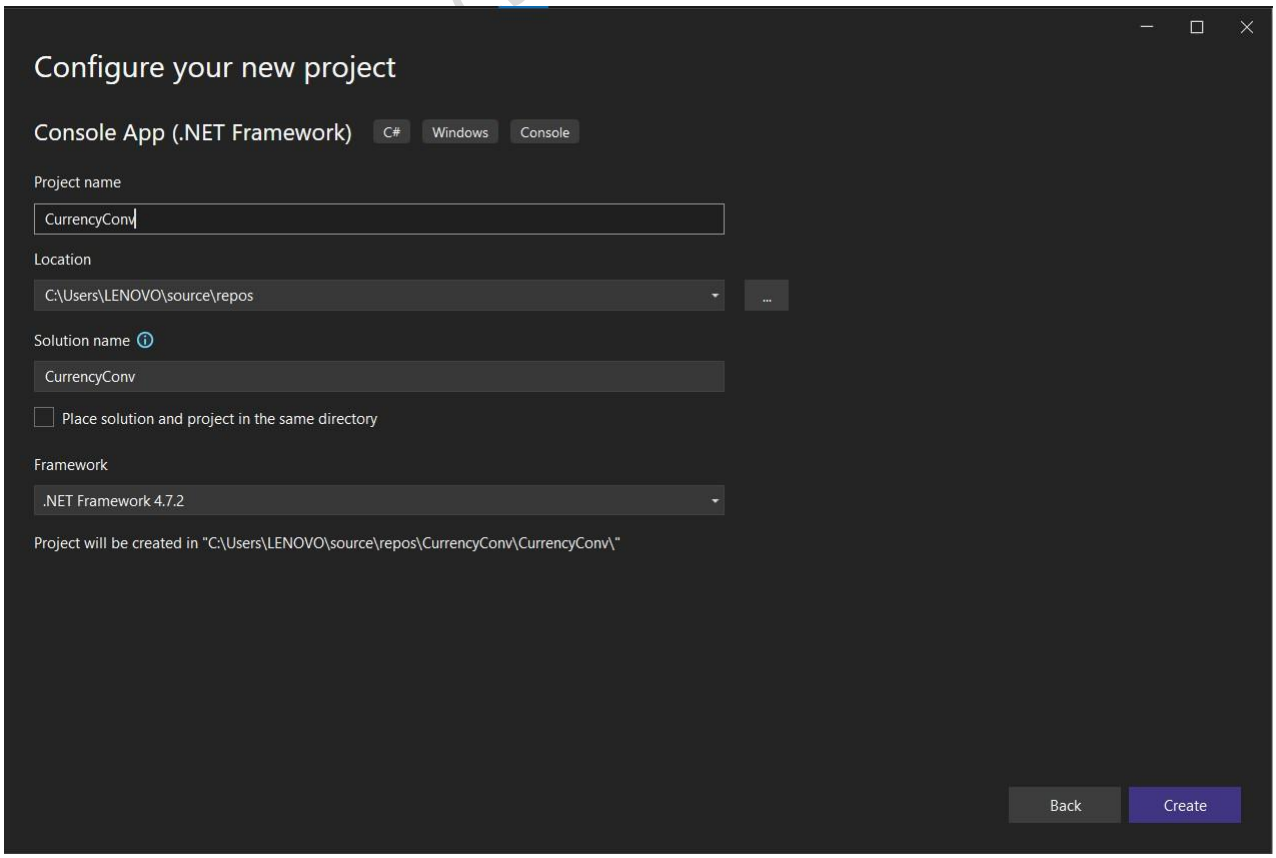
.Net Client

1] open visual studio and select create a new project the following window will appear:



Here in search bar type “console c#” and select console app for .Net frame work as shown in above image.

2] Give name to the project and press create button as shown in the image:



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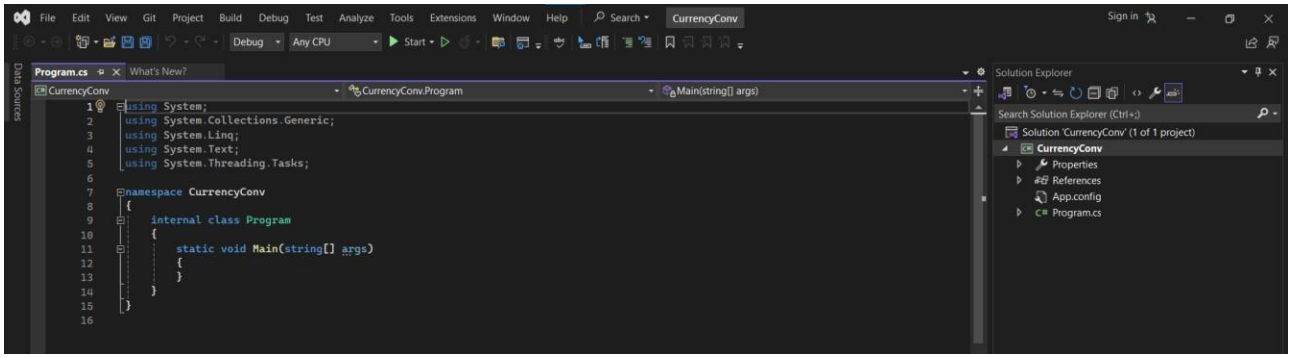
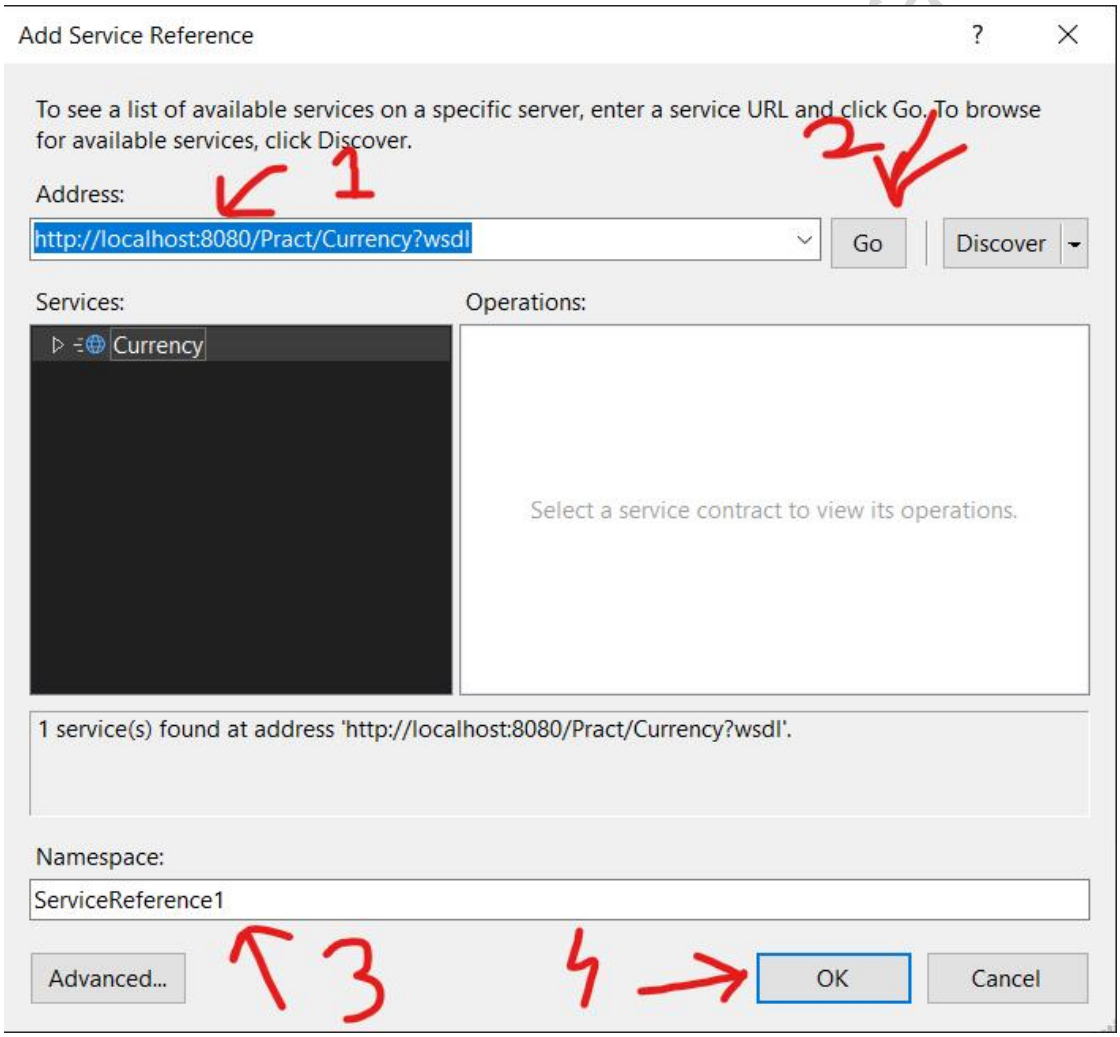


This window should appear after clicking create button now In right side there is solution Explorer.

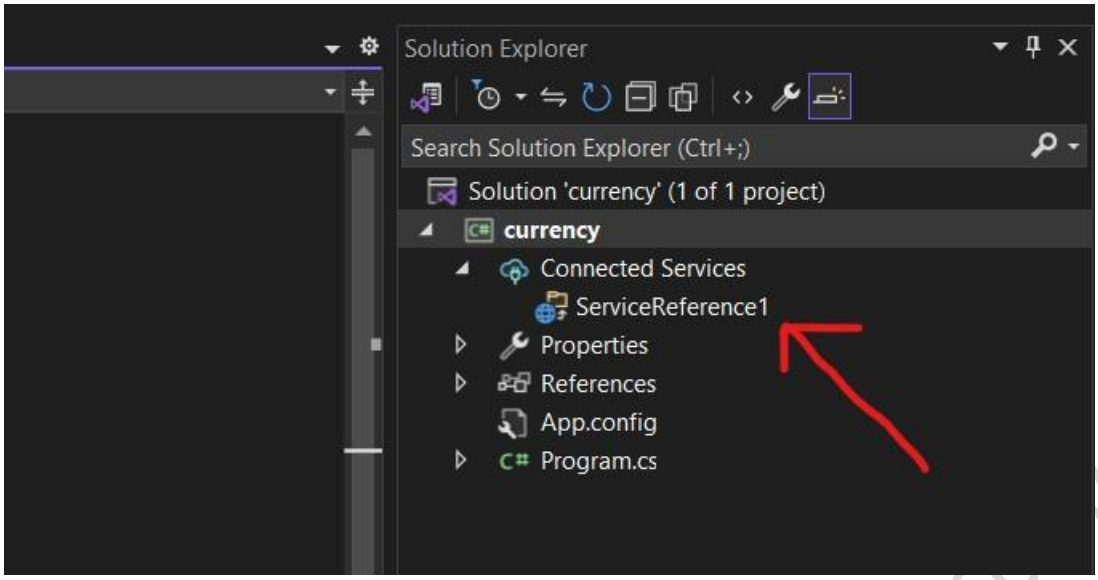
In that right click on your project name and click on add > Service Reference . You will get the following window :

Note: before executing the code make sure that the web service is deployed.

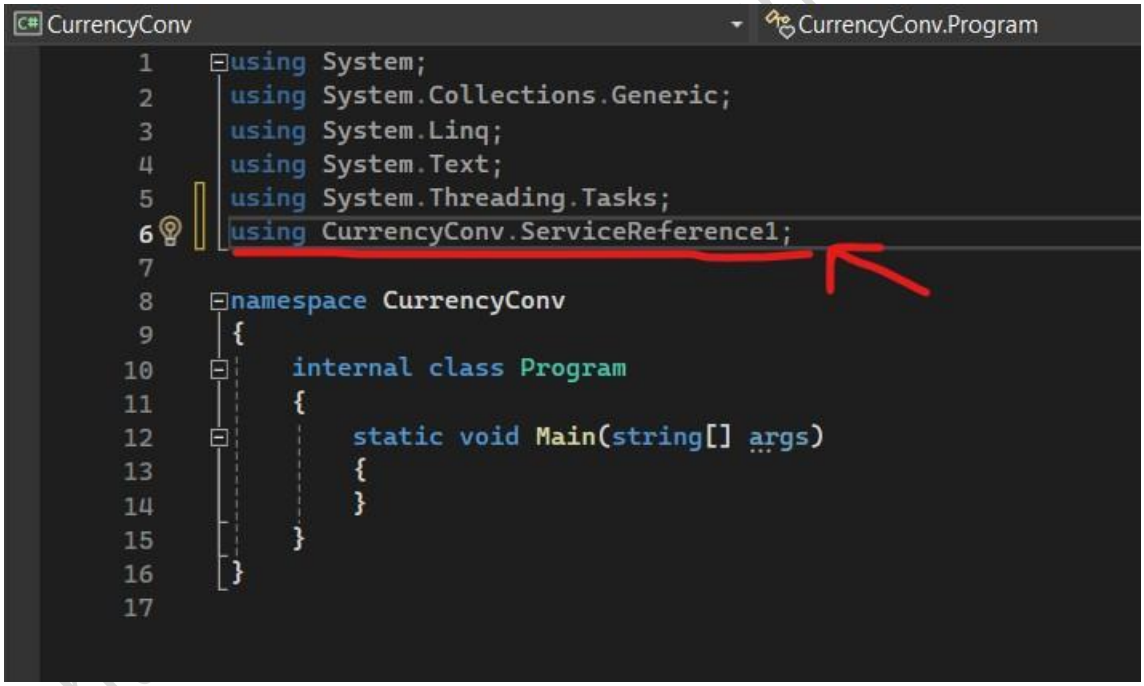


Here in address bar paste the wsdl url the same which is used I python code. And press go button . agter set the namespace In my case I am letting is as it is then press ok button.

In following image u can check in solution Explorer service refrence iscreated.:



3] now in code write the following line as shown in image:



Here type:

Using your_projectname . your_serviceReference_name ;

4] now write the code as shown in the following image:

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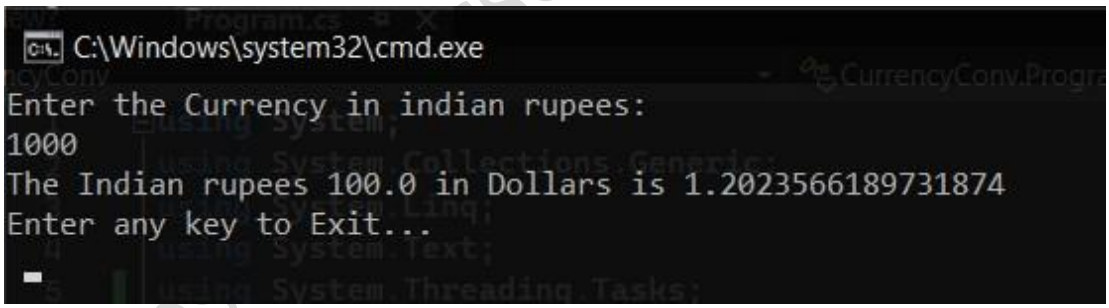
```
namespace CurrencyConv
{
    internal class Program
    {
        static void Main(string[] args)
        {
            CurrencyClient client = new CurrencyClient();
            Console.WriteLine("Enter the Currency in Indian Rupees : ");
            double d = double.Parse(Console.ReadLine());
            Console.WriteLine(client.InrtoDollar(d));
            Console.WriteLine("Enter any key to Exit...");
            Console.ReadKey();
            Console.ReadLine();
        }
    }
}
```

Note:

Here CurrencyClient is my webservice class name and **operation() is my method name** as show you can also check your own:

5] when you run the above code you get the following output:



Practical-2

Define a simple services like Converting Rs into Dollar and Call it from different platform like JAVA and .NET

Steps:

Note : for all these steps in brief refer practical no.1 document

1] create a new project and create a new webservice

2] now right click on the code and click on insert code > add new web service operation

3] after give name to operation **FtoC** and add one parameter **a** of double data type and click ok the code will auto generate .

4] now do the following changes in that auto generated code:

```
 */
@WebMethod(operationName = "FtoC")
public String FtoC(@WebParam(name = "a") double a) {
    //TODO write your implementation code here:
    return "The Fahrenheit Temperature "+a+" in Celsius is "+((a-32)*5/9);
}
```

Now deploy the model.

5] After deploying the model just right click on your web service and click on test web service . and you will get redirected to a browser page where you can check that your web service is working or not.

Creating java Client using jsp

5] now right click on web pages > new > jsp . and give name as input jsp.

Again right click on web pages > new > jsp . and give name as output jsp.

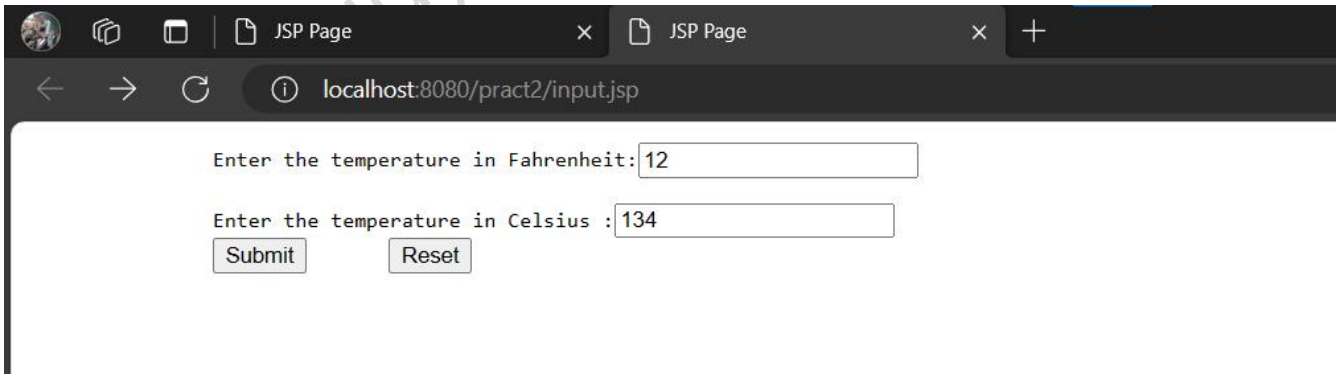
6]In input.jsp write the following code :

```
<body>
    <form action="output.jsp">
        <pre>
            Enter the temperature in Fahrenheit:<input type="text" name="t1" required>

            Enter the temperature in Celsius :<input type="text" name="t2" required>
            <input type="submit">       <input type="reset">
        </pre>
    </form>
</body>
```

7] create a Web service client and give package name as “Client”. After creating web service client go to web service references and drag and drop the operations in output.jsp in body tag as shown below:

```
        <%-- start web service invocation --%><hr/>
<%
try {
    client.Conv_Service service = new client.Conv_Service();
    client.Conv port = service.getConvPort();
     // TODO initialize WS operation arguments here
    double a = Double.parseDouble(request.getParameter("t1"));
    // TODO process result here
    java.lang.String result = port.FtoC(a);
    out.println(result);
} catch (Exception ex) {
    // TODO handle custom exceptions here
}
%>
<%-- end web service invocation --%><hr/>
```

8] now deploy the model again and run the input.jsp file you will get redirected to the browser page as shown:



After submitting you will get the following output:

Python Client

1] Deploy the web service and write the following code :

Code :

```
from zeep import Client
wsdl_url='http://localhost:8080/Practical_2/TempConverter?wsdl'
client=Client(wsdl_url)
#call the method on the webservice
d=float(input("Enter temperaure in Fahrenheit :"))
result = client.service.FtoC(d)
print(result)
```

2] replace your_wsdl_url with the url which was copied at the time of web service client creation .

In step no.16 . and replace the operation_name with your method or operation name. and pass parameter to it

3] final code should look like following:

2.py - C:\Users\LENOVO\AppData\Local\Programs\Python\Python311\2.py (3.11.4)

File Edit Format Run Options Window Help

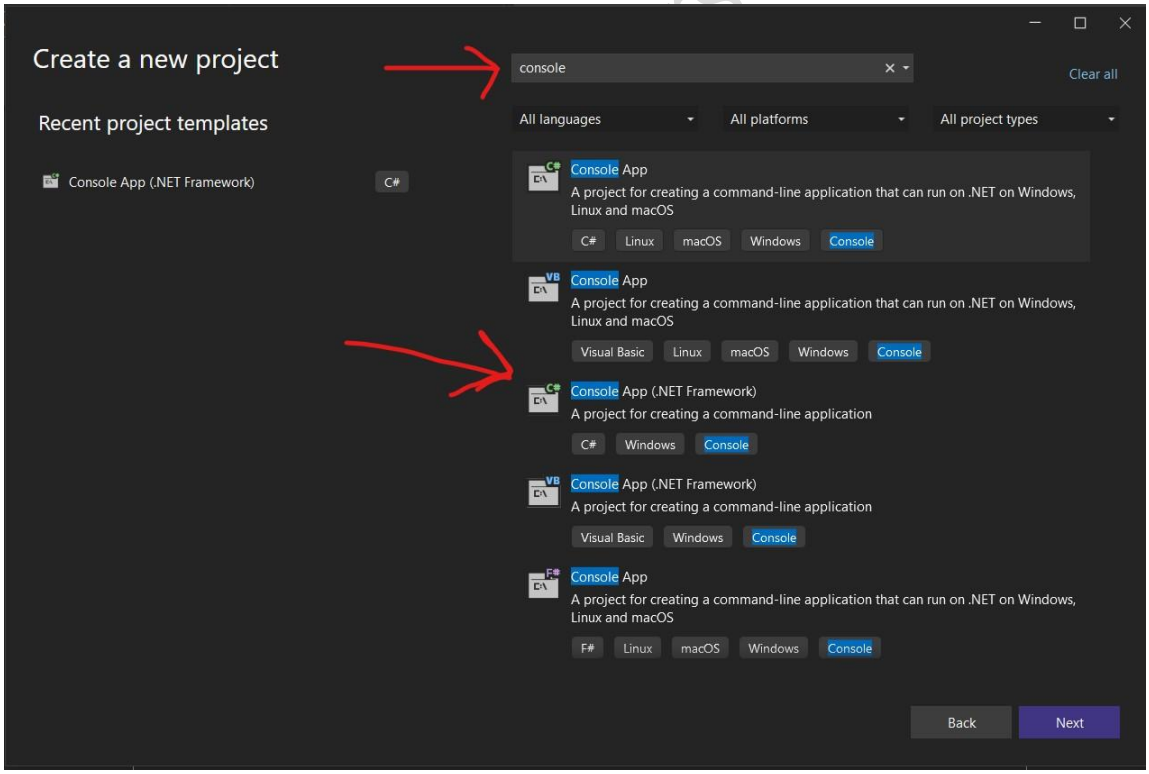
```
from zeep import Client
wsdl_url='http://localhost:8080/Practical_2/TempConverter?wsdl'
client=Client(wsdl_url)
#call the method on the webservice
d=float(input("Enter temperaure in Fahrenheit :"))
result = client.service.FtoC(d)
print(result)
```

4] after running the above code you should get the following output:

```
===== RESTART: C:\Users\LENOVO\AppData\Local\Programs\Python\Python311\2.
Enter temperaure in Fahrenheit :1200
The Fahrenheit Temperature 1200.0 in Celsius is 648.8888888888889
```

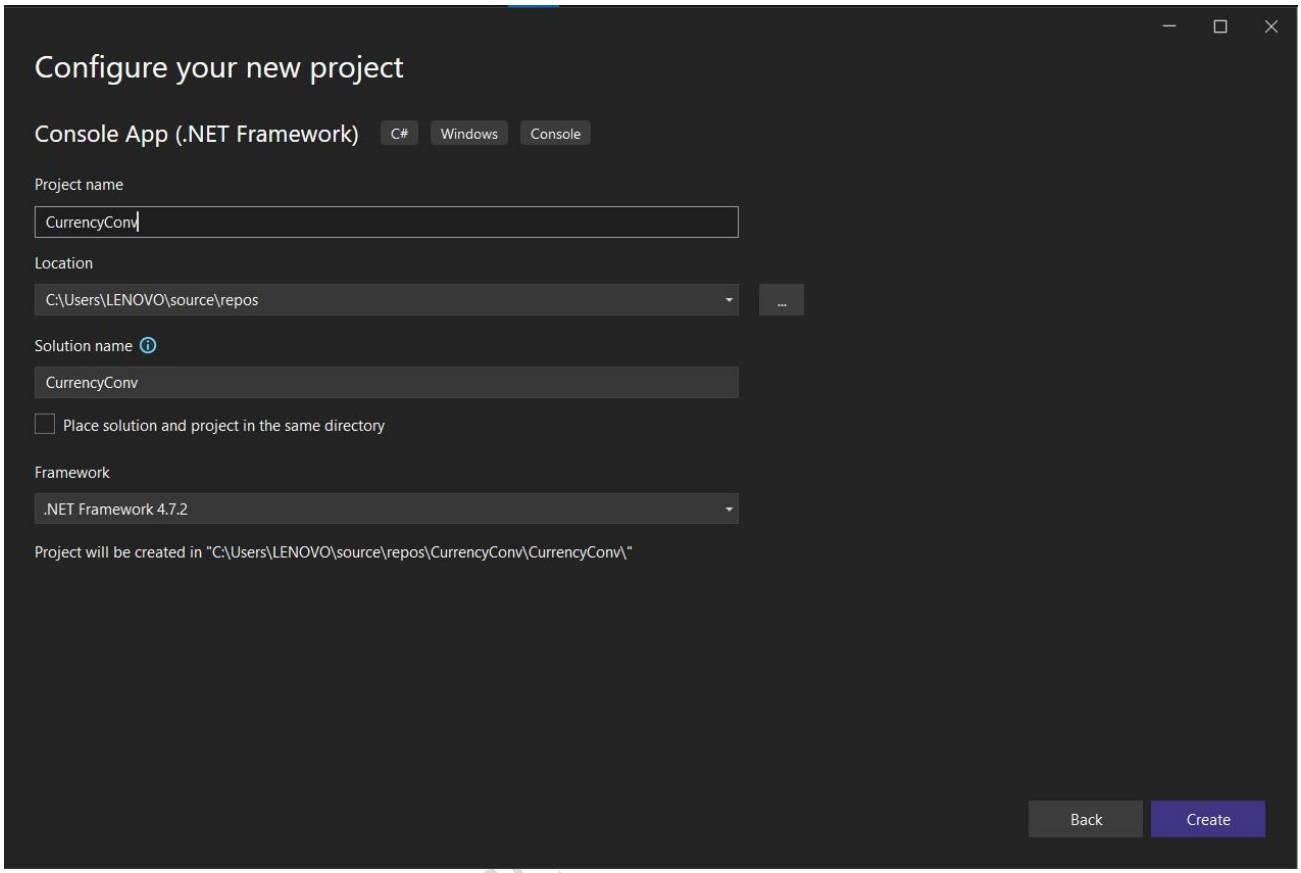
.Net Client

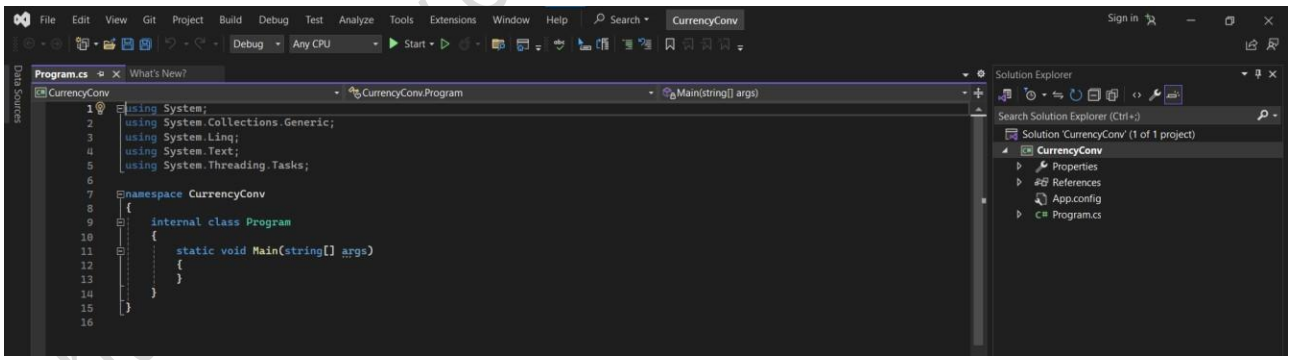
1] open visual studio and select create a new project the following window will appear:



Here in search bar type “console c#” and select console app for .Net frame work as shown in above image.

2] Give name to the project and press create button as shown in the image:

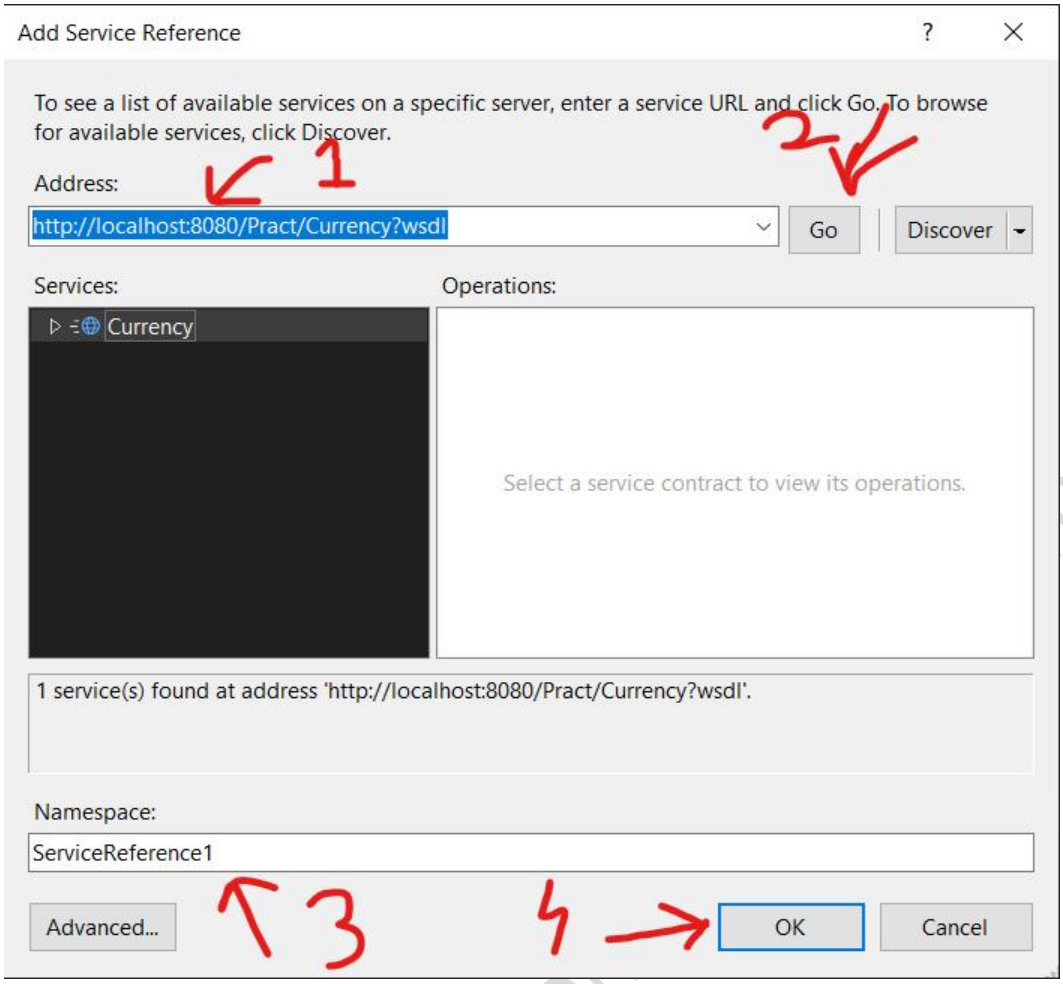




This window should appear after clicking create button now In right side there is solution Explorer.

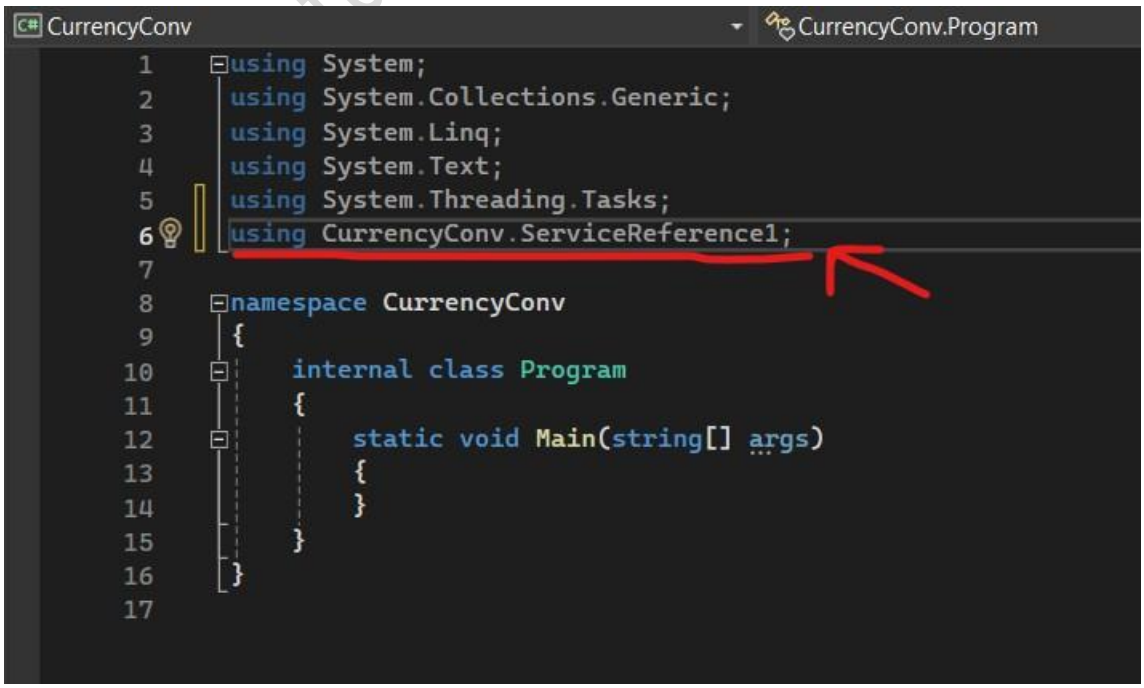
In that right click on your project name and click on add > Service Reference . You will get the following window :

Note: before executing the code make sure that the web service is deployed.



Here in address bar paste the wsdl url the same which is used I python code. And press go button . agter set the namespace In my case I am letting is as it is then press ok button

3] now in code write the following line as shown in image:



Here type:

Using your_projectname . your_serviceReference_name ;

4] now write the code as shown in the following image:

```
static void Main(string[] args)
{
    convClient client = new convClient();
    Console.WriteLine("Enter the Temperature: ");
    double d = double.Parse(Console.ReadLine());
    Console.WriteLine(client.FtoC(d));
    Console.WriteLine("Enter any key to Exit...");
    Console.ReadKey();
    Console.ReadLine();
}
```

Note:

Here my webservice class name is conv and convClient is my webservice client class name and **FtoC is method name** as shown you can also check your own:

5] when you run the above code you get the following output:

```
C:\Windows\system32\cmd.exe
Enter the Temperature in Fahrenheit :
1200
The Fahrenheit Temperature 1200.0 in Celsius is 648.8888888888889
```

Practical-03A

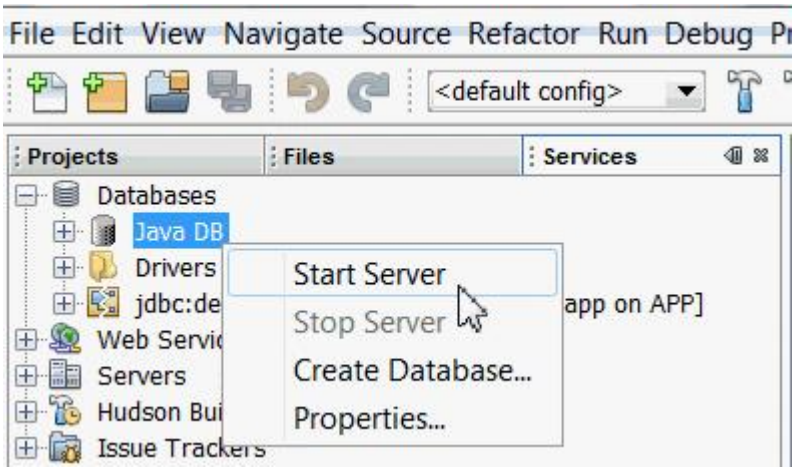
Create a Simple REST Service

- Demonstrate CRUD operations with suitable database using RESTful Web service.

1. To start the Java DB Database from NetBeans, perform the following steps.

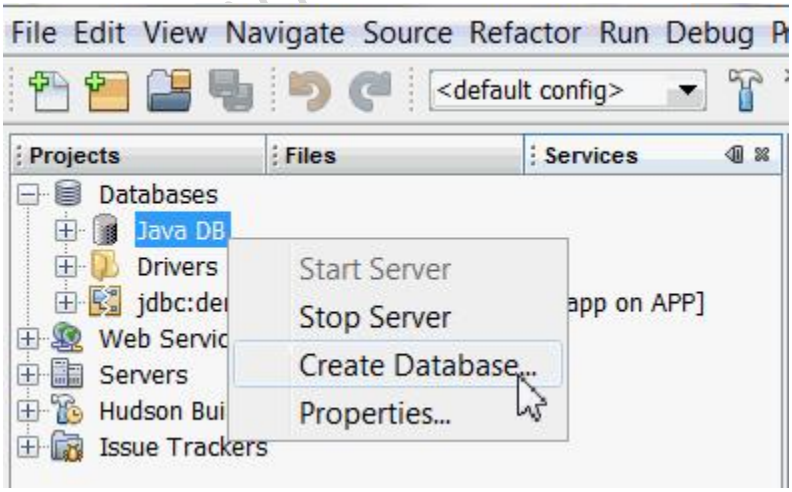
Click Services tab -> Expand Databases node. ->Right-click Java DB icon.

->Select Start Server



2. To create playerDB database, perform the following steps:

a. Right-click **Java DB** icon, select **Create Database**.



b. Enter the following information for the database:

Database Name: **playerDB**
User Name: **john**
Password: **john**
Confirm Password:**john**

c. Click OK.

3. To connect to the newly created database playerDB, perform the following steps

a. Right-click jdbc:derby://localhost:1527/playerDB connection.

b. Select Connect.

4. Create tables and populate them with data in **playerDB** database.

a. In NetBeans select File > Open File.

b.In the file select playersDB.sql.

c. Click Open. The script automatically opens in the SQL Editor.

5. Examine the contents of the database.

a. In the Services window, expand the jdbc:derby://localhost:1527/playerDB connection under the Databases node.
b. Right-click the connection and select Refresh.
c. Expand the john schema. You see the nodes for Tables, Views, and Procedures. d. Expand the Tables node to see the PLAYER and TEAM tables. e. Right-click the PLAYER table node and select View Data.

Player server

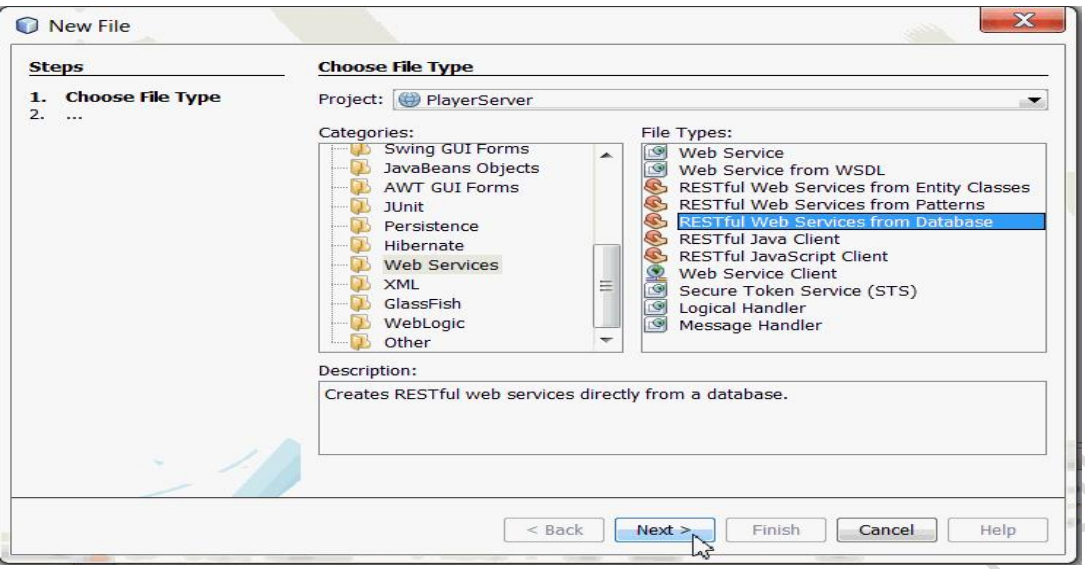
To create RESTful Web Services, you need a Java Web application project. In the below section you will create a demo Java web project, PlayerServer.

To create new Java Web Project, select File -> New Project -> Java web -> Web Application.

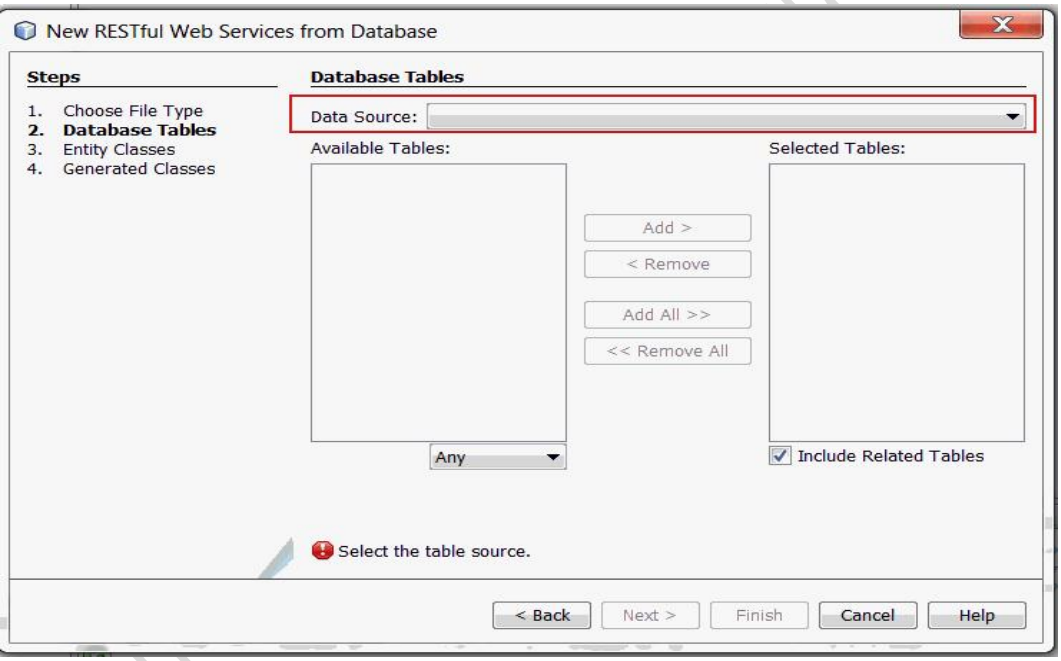
Generating web service

To generate RESTful Web Services do the following:

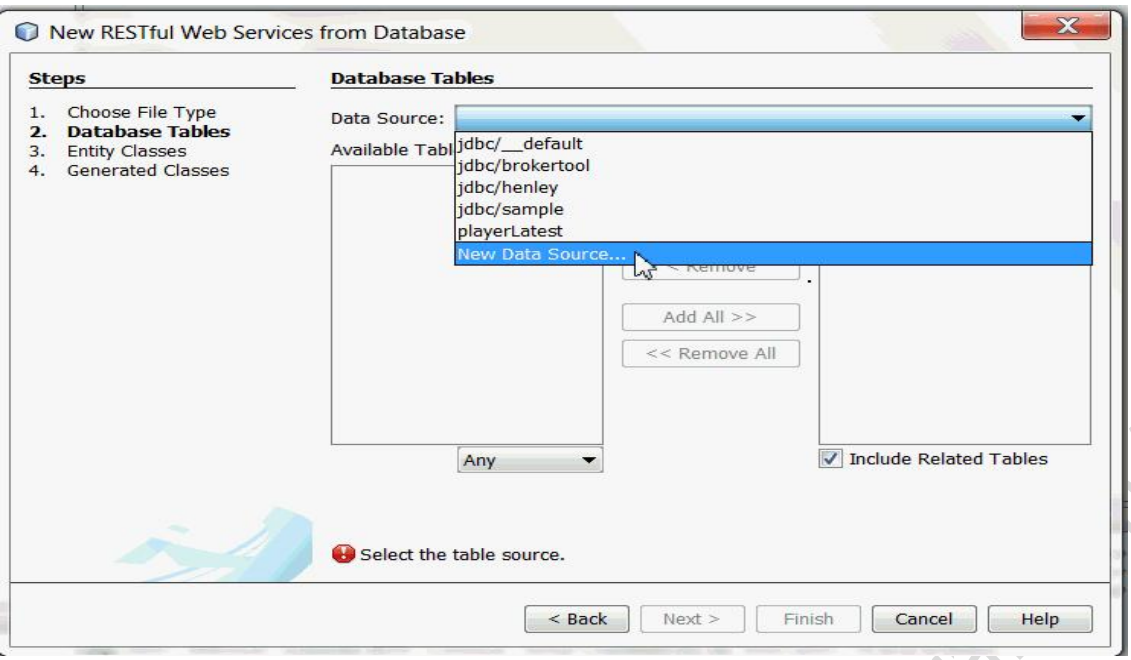
1.Right-click the PlayerServer and choose New > Other > Web Services > RESTful Web Services from Database. The New RESTful Web Service wizard opens on the Database Tables panel.



2. In the Database Tables window, select Data Source.



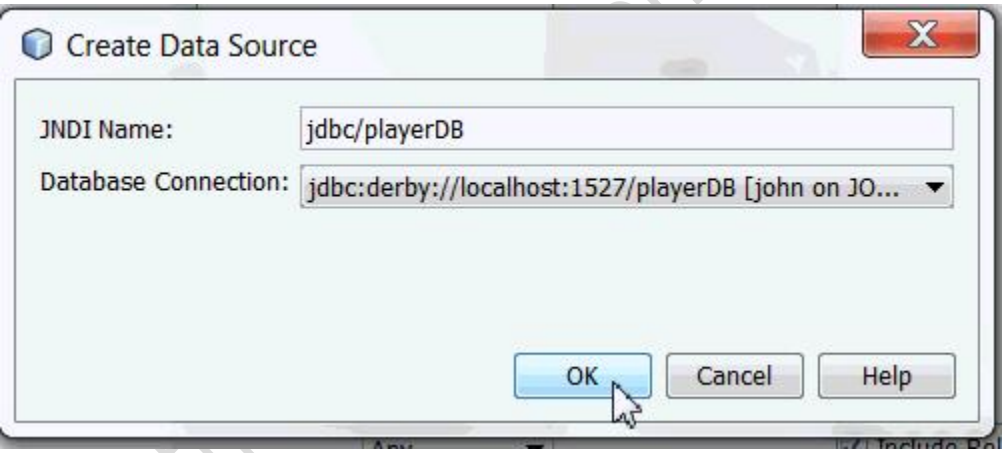
3. Next select "New Data Source" from the Drop-down list.



a. In the Create Data Source Window, enter the following information:

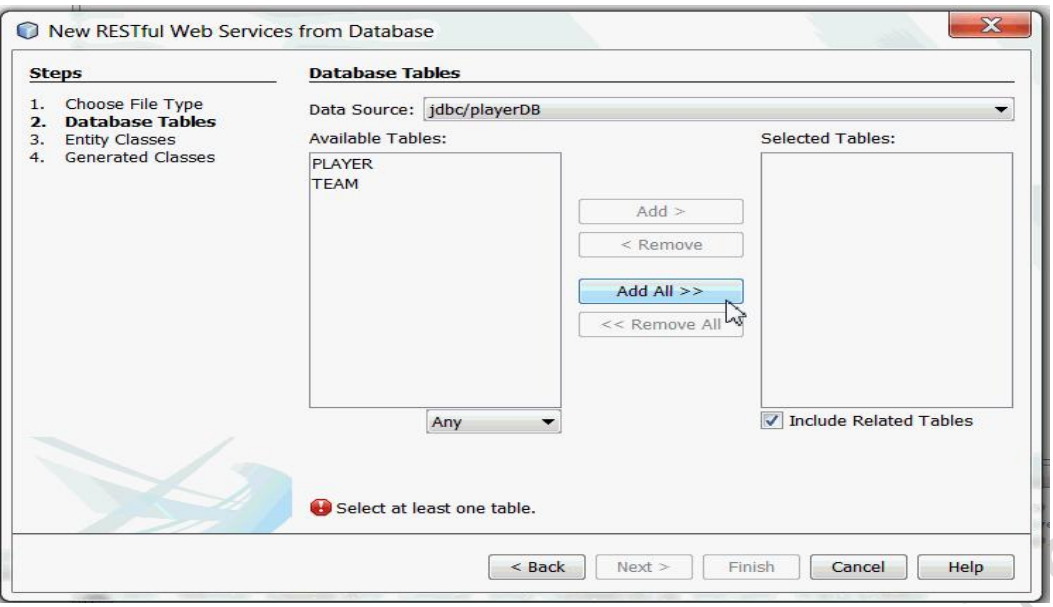
- **JNDI name**: jdbc/playerDB
- **Database connection :** select jdbc:derby://localhost:1527/playerDB[john on JOHN]

b. Click OK.



The PLAYER and TEAM tables are displayed under the Available Tables column.

c. Click **Add All**. The PLAYER and TEAM tables are displayed under the Selected Tables column.



d. Click Next.

4. In the **Entity Classes** window, complete the following steps:

a. Enter the package name as com.playerentity.

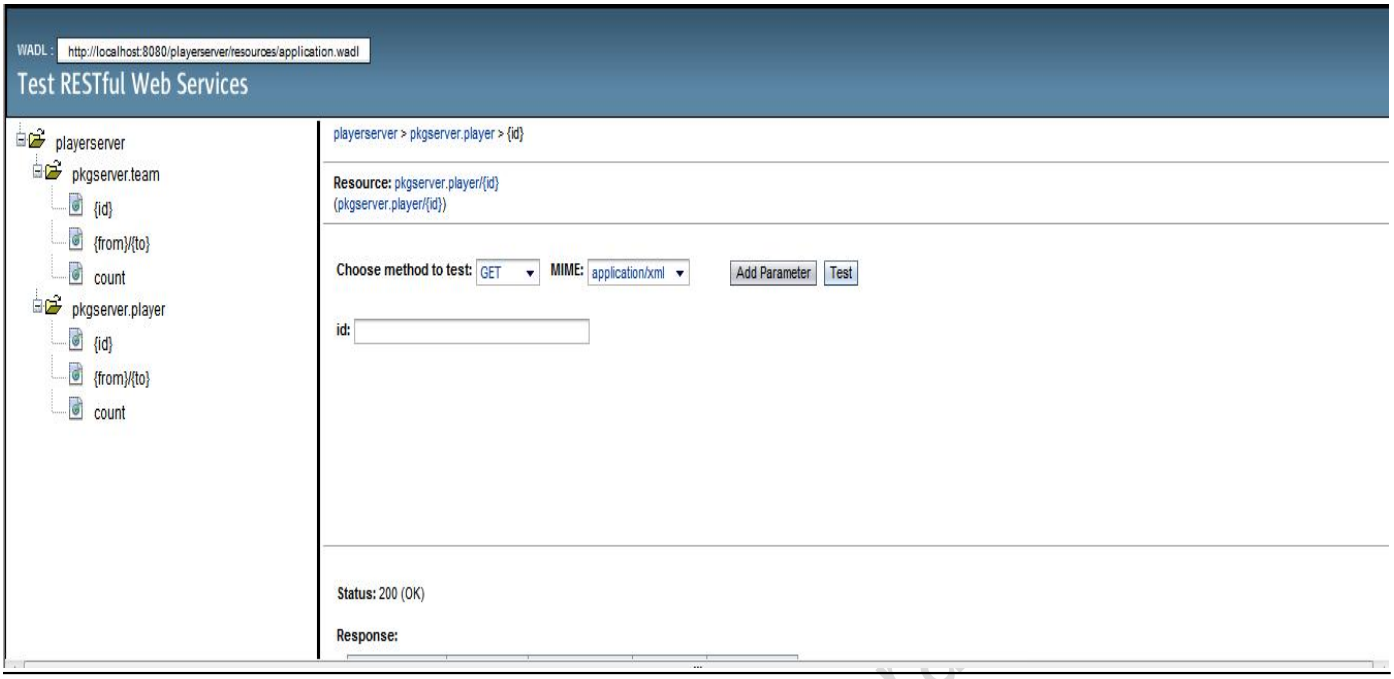
b. Click Next.

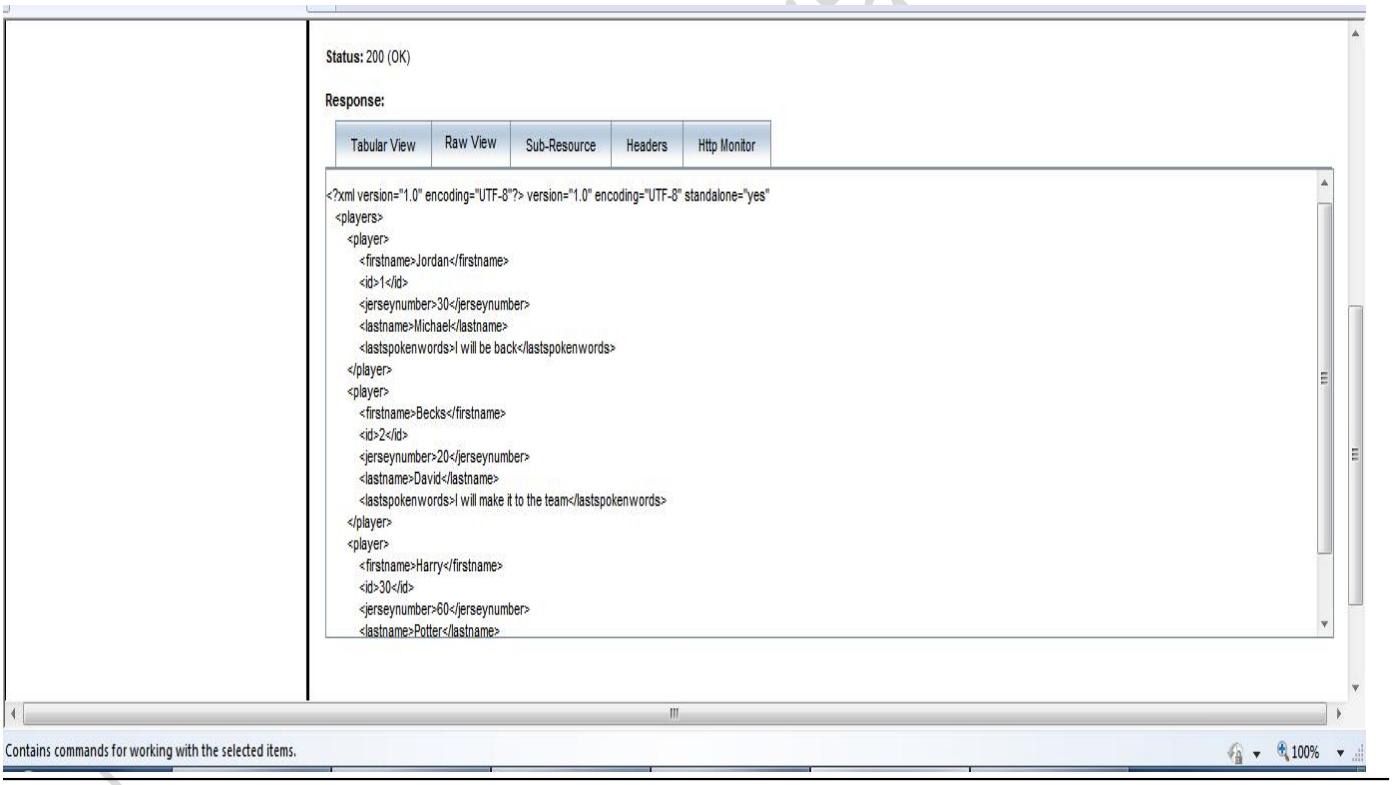
5. In the **Generated Classes** Window, click Finish with default values.

Test RESTful web Services

1. To Generate Web Services Test client, complete the following steps.
   a. Select **PlayerServer** project.
   b. Right-click and select **Test RESTful Web Services.**
2. Select "Web Test Client in project" and click Browse.
3. a. In the Select Project dialog box, select **PlayerServer** and click OK.

b. **Configure Rest Test Client window** is displayed, click OK.





Player Client

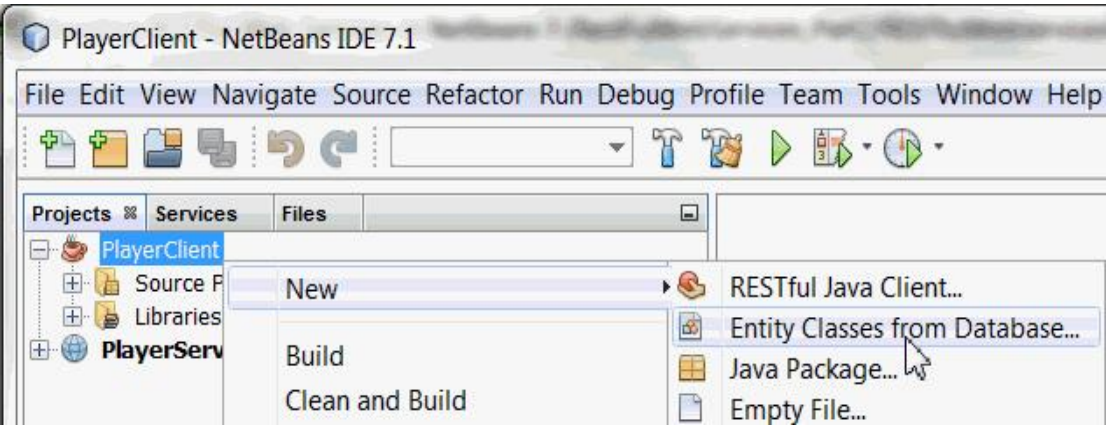
To create new Java Project, select File > New Project >Playerclient

Generating Entity Classes from Database

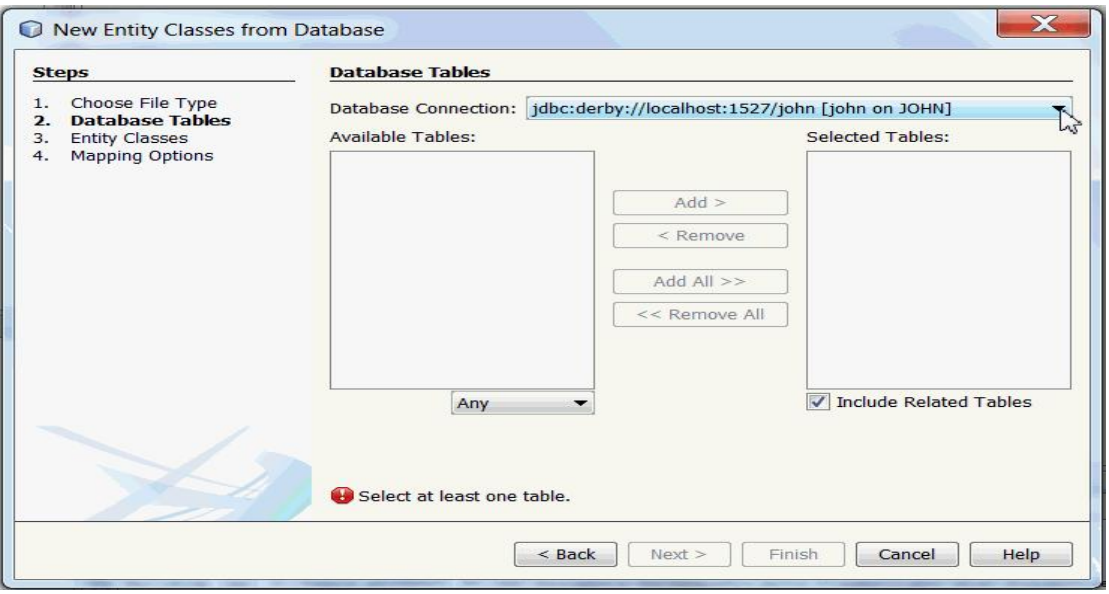
Implementing CRUD operations on the database, requires creation of Entity Classes to communicate with the database. The following section demonstrates how to create Entity

Classes from database.

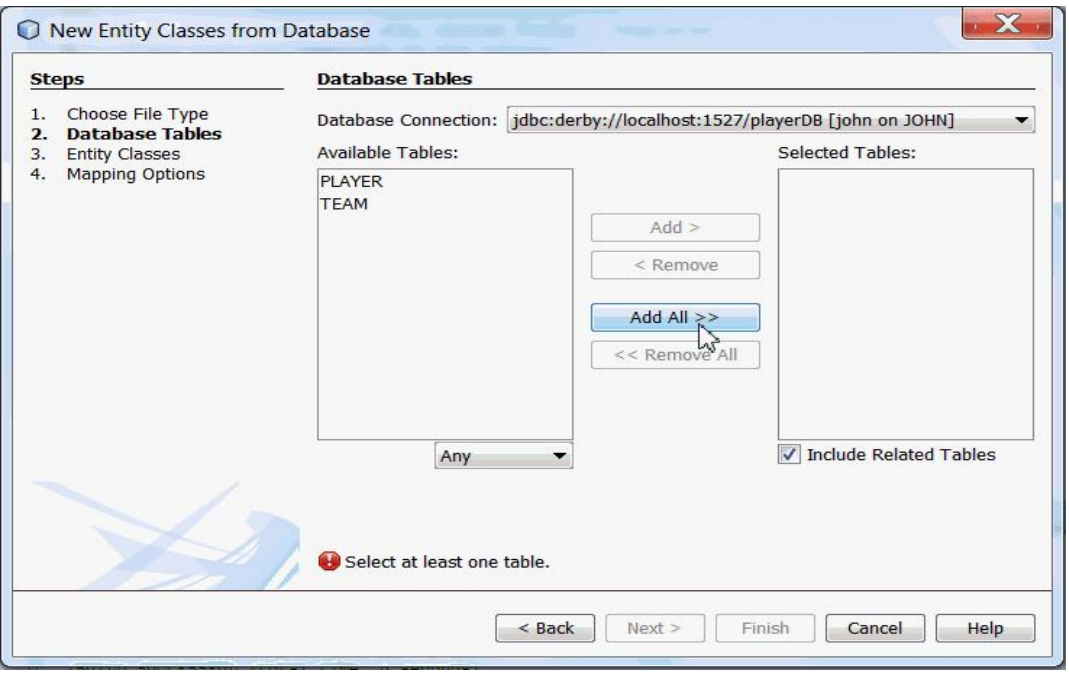
1. Right-click **PlayerClient** Project and select ***New > Entity Classes From Database***.



2. a. In the Database Tables window, **Database Connection** field
select jdbc:derby://localhost:1527/playerDB[john on JOHN] from the drop-down list.

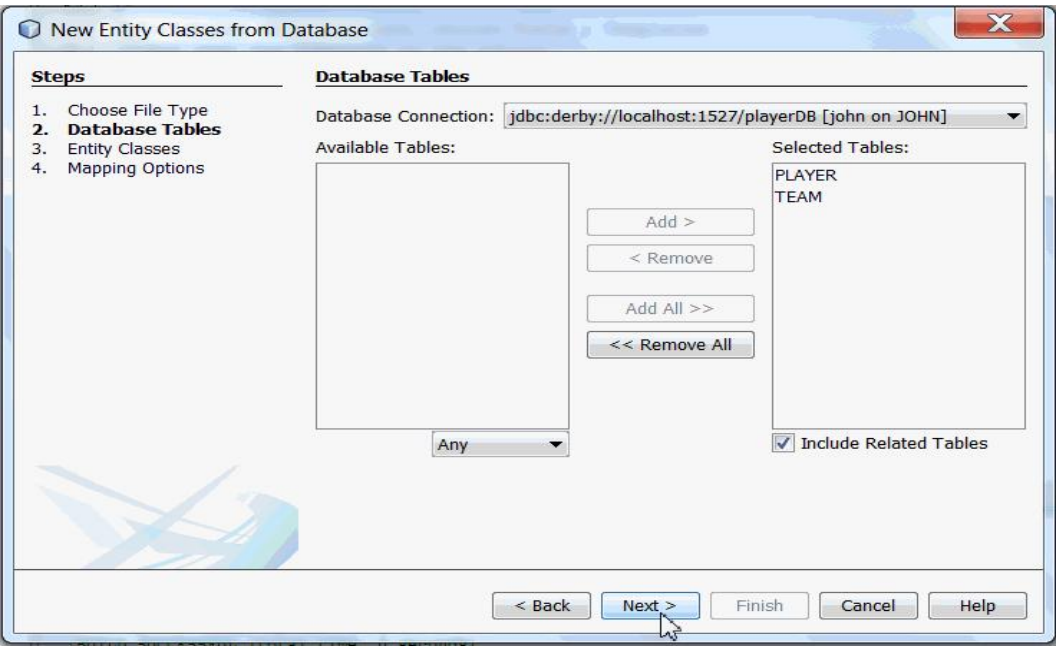


You see PLAYER and TEAM tables in Available Tables category
b. Click Add All

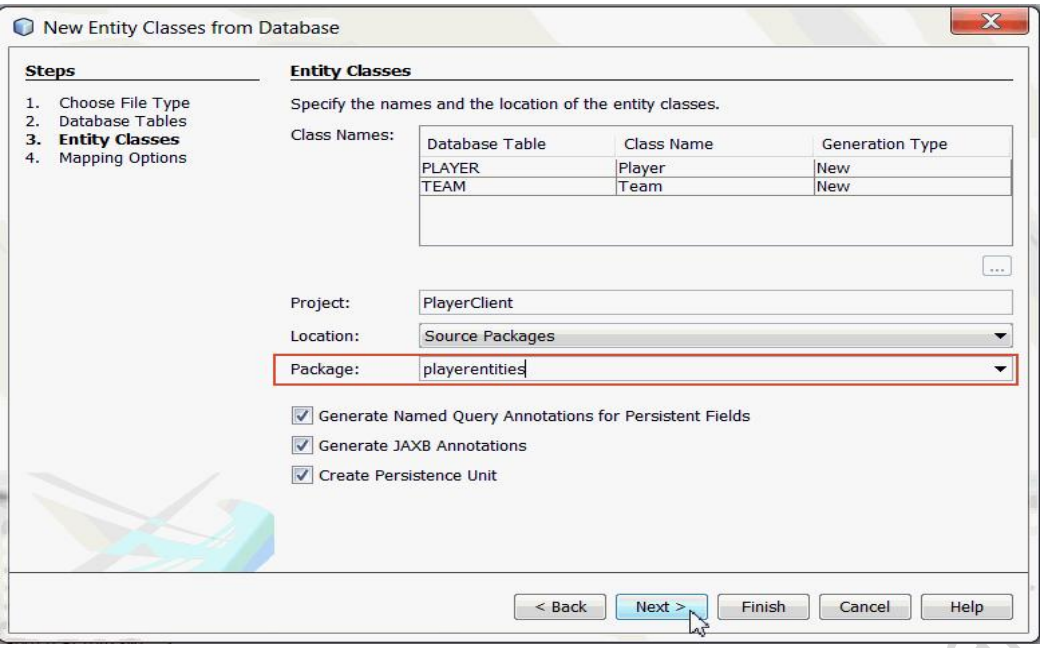


You see both the tables PLAYER and TEAM in Selected Tables Category.

c. Click Next



3. In the Entity classes Window, enter the Package Name as **playerentities** and click Next.

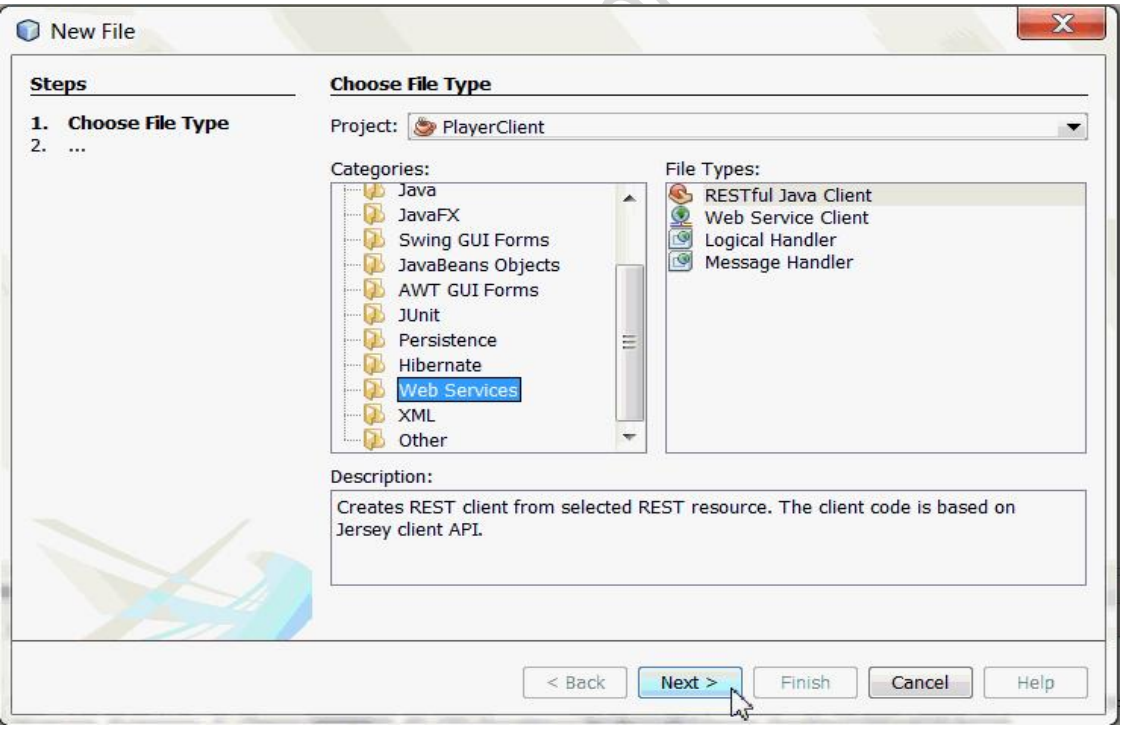


Create Client

Complete the following steps to create RESTful client in PlayerClient project.

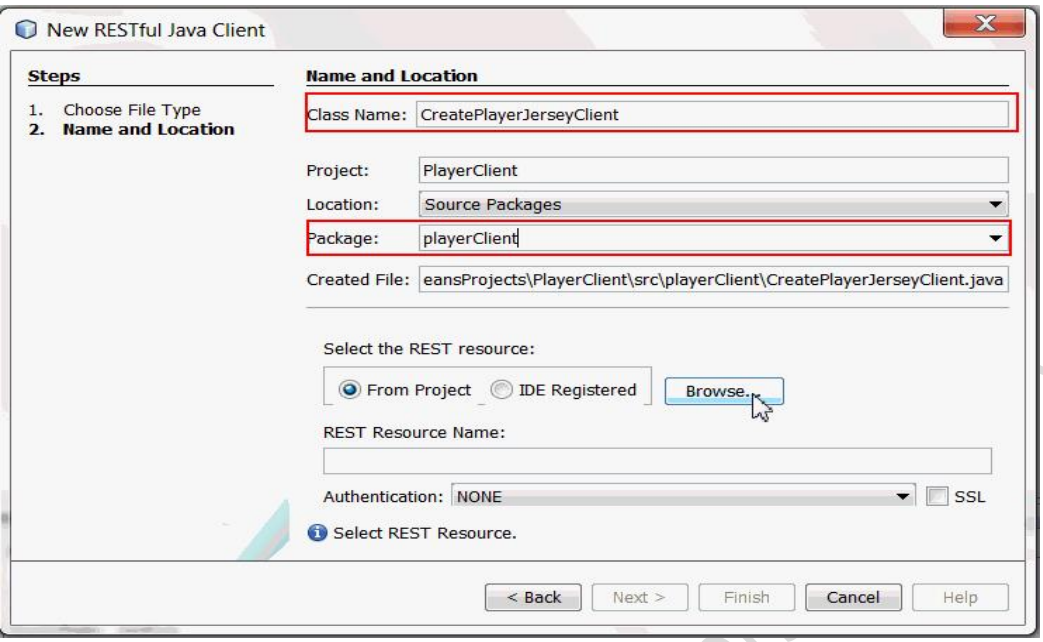
a. Right-click the PlayerClient and choose New > Other > Web Services > RESTful Java Client.

b. Click Next.

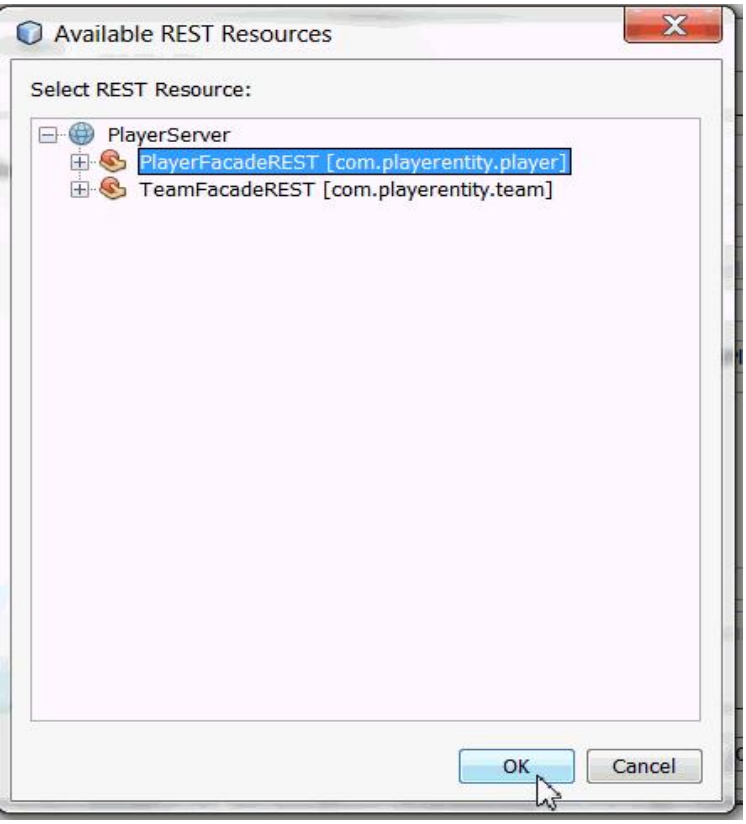


1. a.Enter the following details for the fields in the New Restful Java Client window :

- Class Name: CreatePlayerJerseyClient
- Package: playerClient
- Select the REST resource: From Project and Click Browse.



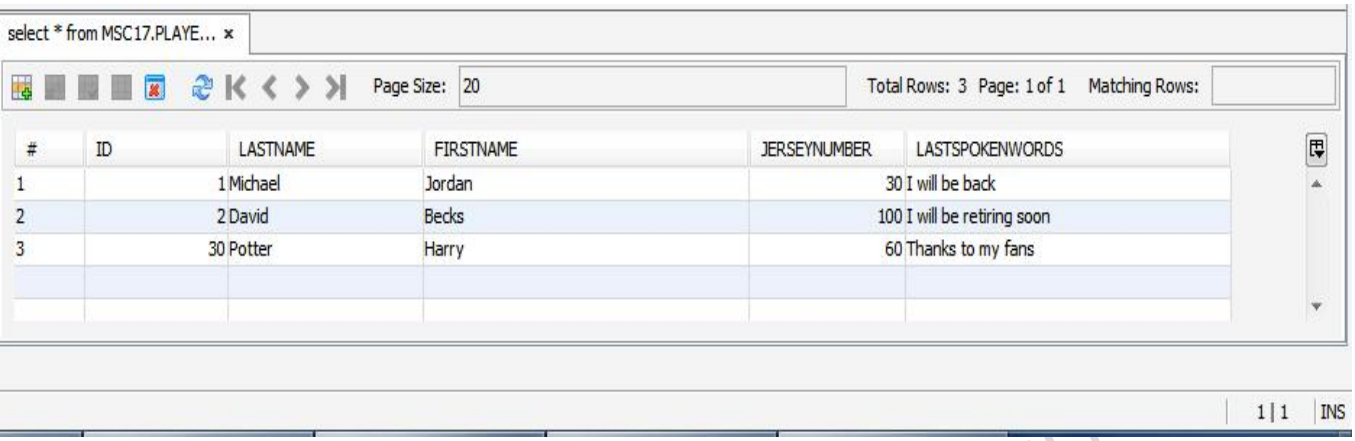
b. Select PlayerServer.
c. Expand the PlayerServer application.
d. Select PlayerFacadeREST[com.playerentity.player].



2.Add the main method.

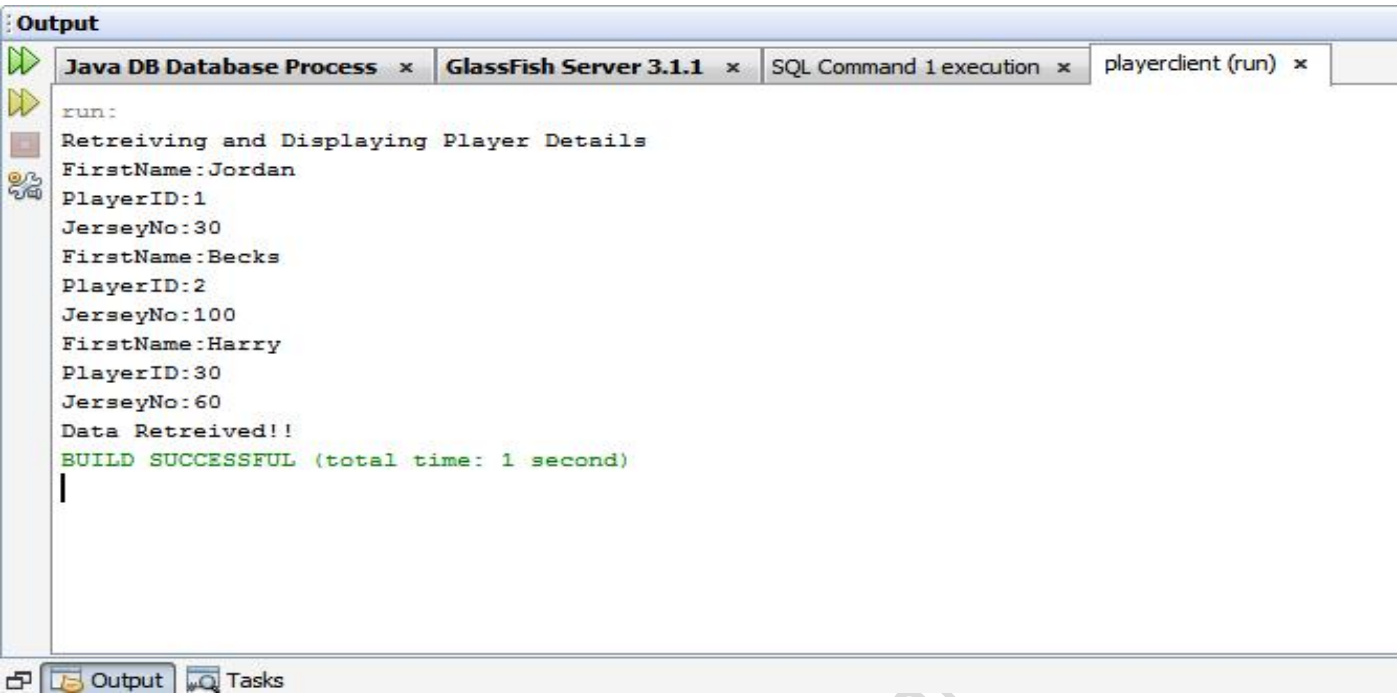
```
public static void main(String[]args){
    CreateClient client1 = new CreateClient();
    ClientResponse response = client1.findAll_XML(ClientResponse.class);

    GenericType<List<Player>> genericType = new GenericType<List<Player>>(){};
    List<Player> data = new ArrayList<Player>();
    data = (response.getEntity(genericType));

    Player p = new Player();
    p.setFirstname("Harry");
    p.setId(30);
    p.setJerseynumber(60);
    p.setLastname("Potter");
    p.setLastspokenwords("Thanks to my fans");
```

```
    client1.create_XML(p);
  }
```



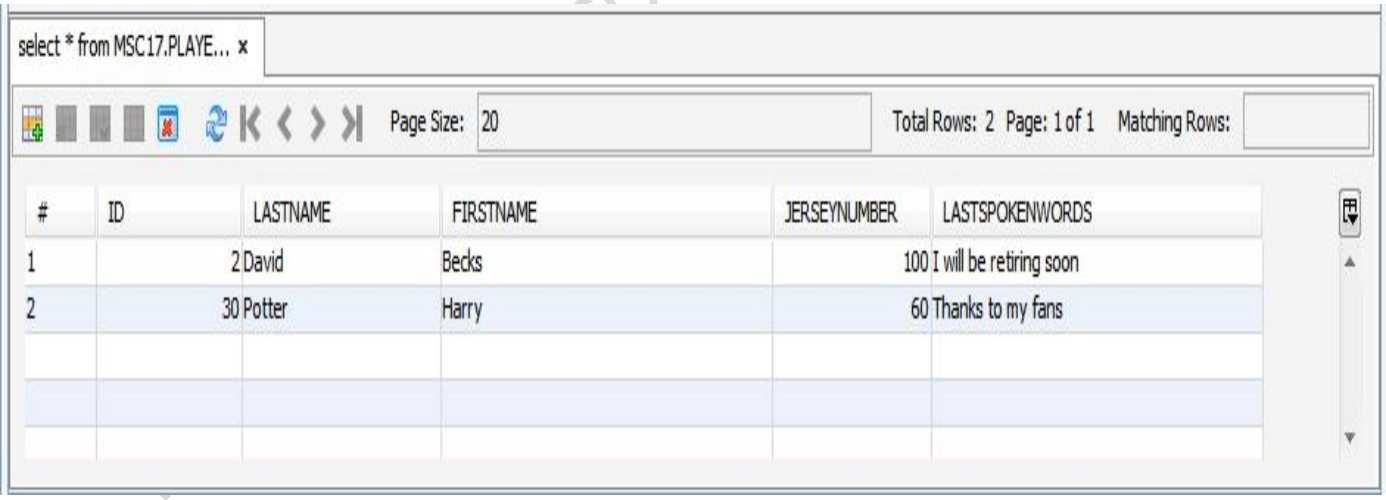
Read Client

```
public static void main(String[]args){
    ReadClient client1 = new ReadClient();
    ClientResponse response = client1.findAll_XML(ClientResponse.class);
    GenericType<List<Player>> genericType = new GenericType<List<Player>>(){};
    List<Player> data = new ArrayList<Player>();
    data = (response.getEntity(genericType));
    System.out.println("Retreiving and Displaying Player Details");
    for(Player players:data){
       System.out.println("FirstName:"+players.getFirstname());
       System.out.println("PlayerID:"+players.getId());
       System.out.println("JerseyNo:"+players.getJerseynumber());
    }
    System.out.println("Data Retreived!!");
  }
```



Delete Client

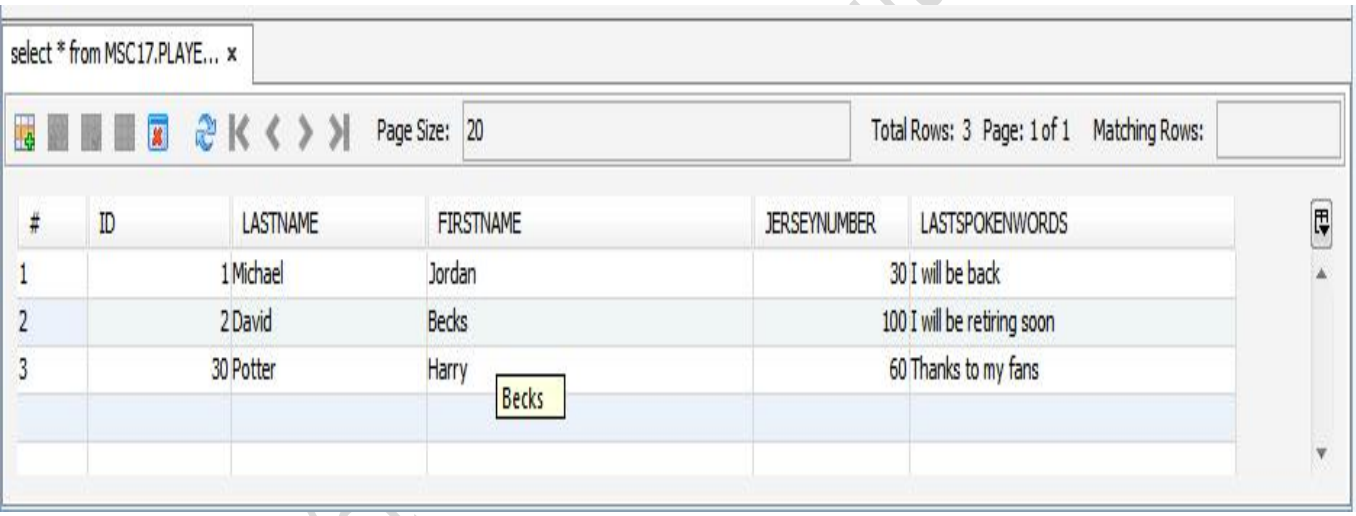
```
public static void main(String[]args){
    DeleteClient client1 = new DeleteClient();
    client1.remove("1");
  }
```



Update Client

```
public static void main(String[]args){
    UpdateClient client1 = new UpdateClient();
```

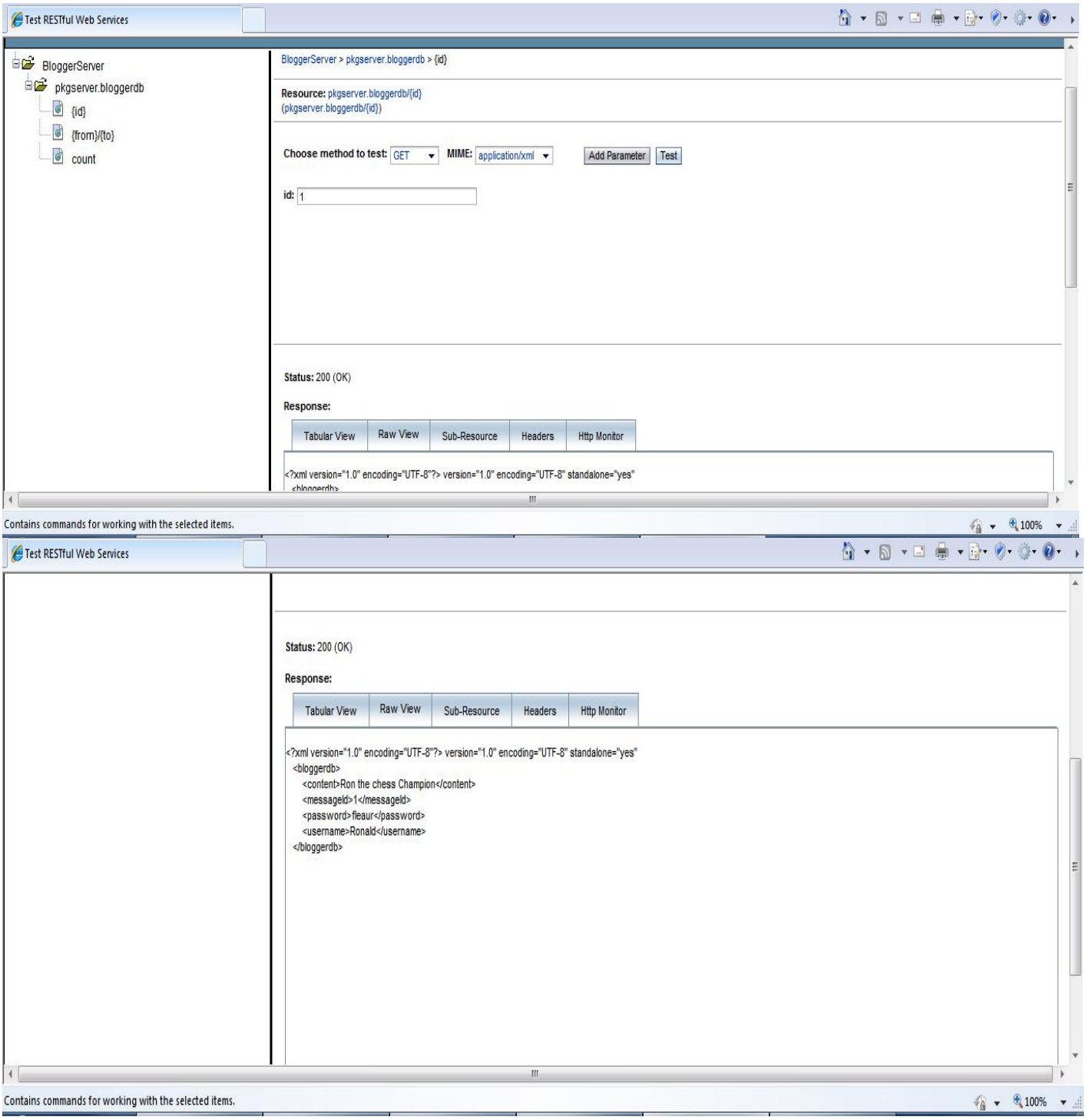
```
    ClientResponse response = client1.find_XML(ClientResponse.class, "2");
    GenericType<Player>genericType = new GenericType<Player>(){};
    Player player = response.getEntity(genericType);
    System.out.println("First Name: "+player.getFirstname());
    System.out.println("PlayerId: "+player.getId());
    System.out.println("JerseyNo: "+player.getJerseynumber());
    System.out.println("Last Name: "+player.getLastname());
    System.out.println("Last Spoken Words: "+player.getLastspokenwords());
    player.setJerseynumber(100);
    player.setLastspokenwords("I will be retiring soon");
    client1.edit_XML(player);
}
```



Practical No. 3B

- Develop Micro-blogger application (like Twitter) using RESTful Web services.

Blogger Server



Blogger Client

Create Client

```
public static void main(String[]args){
      CreateClient client1 = new CreateClient();
      ClientResponse response = client1.findAll_XML(ClientResponse.class);
     GenericType<List<Bloggerdb>> genericType = new  GenericType<List<Bloggerdb>>(){};
      List<Bloggerdb> data = new ArrayList<Bloggerdb>();
      data = (response.getEntity(genericType));
      Bloggerdb b = new Bloggerdb();
      b.setMessageId(4);
      b.setContent("Draco the Slytherine Champion");
      b.setUsername("Draco");
      b.setPassword("Malfoy");
      client1.create_XML(b);
}
```

#	MESSAGE_ID	USERNAME	CONTENT	PASSWORD
1	1	Ronald	Ron the chess Champion	fleaur
2	2	Harry	Harry the Quidditch Champion	Ginny
3	3	Hermione	Hermione the scholar	Viktor
4	4	Draco	Draco the Slytherine Champion	Malfoy

Update Client

```
public static void main(String[]args){
      UpdateClient client1 = new UpdateClient();
      ClientResponse response = client1.find_XML(ClientResponse.class, "1");
      GenericType<Bloggerdb>genericType = new GenericType<Bloggerdb>(){};
      Bloggerdb b = response.getEntity(genericType);
      System.out.println("Message id:"+b.getMessageId());
      System.out.println("Content:"+b.getContent());
      System.out.println("Username:"+b.getUsername());
      System.out.println("Password:"+b.getPassword());
      b.setContent("I love food");
      client1.edit_XML(b);
   }
```

#	MESSAGE_ID	USERNAME	CONTENT	PASSWORD
1	1	Ronald	I love food	fleaur
2	2	Harry	Harry the Quidditch Champion	Ginny
3	3	Hermione	Hermione the scholar	Viktor
4	4	Draco	Draco the Slytherine Champion	Malfoy

Delete Client

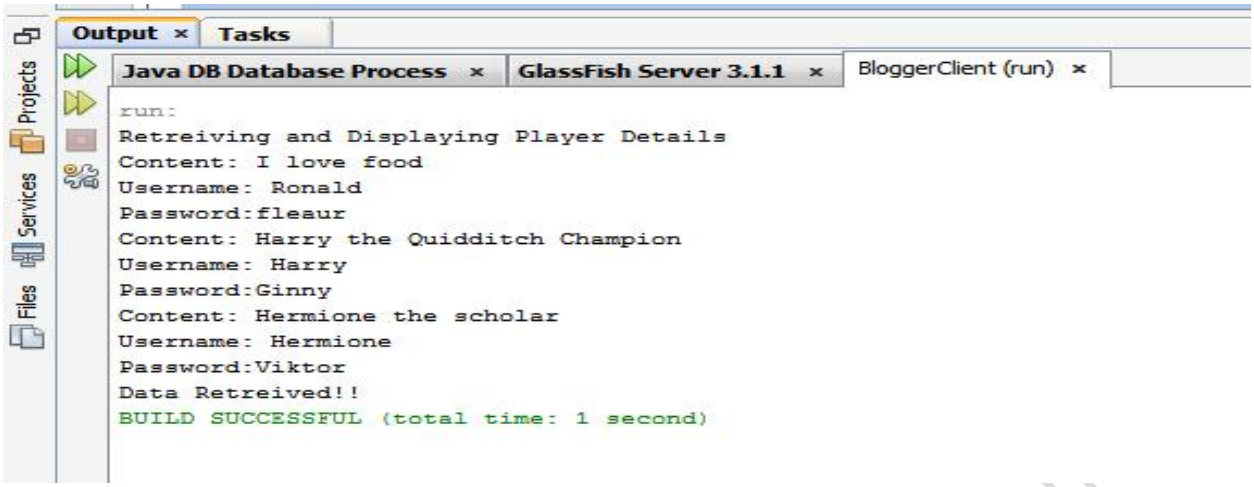
```
public static void main(String[]args){
    DeleteClient client1 = new DeleteClient();
    client1.remove("4");
    System.out.println("Successfully Deleted!!");
  }
```

#	MESSAGE_ID	USERNAME	CONTENT	PASSWORD
1	1	Ronald	I love food	fleaur
2	2	Harry	Harry the Quidditch Champion	Ginny
3	3	Hermione	Hermione the scholar	Viktor

Read Client

```
public static void main(String[]args){
    ReadClient client1 = new ReadClient();
    ClientResponse response = client1.findAll_XML(ClientResponse.class);
    GenericType<List<Bloggerdb>> genericType = new GenericType<List<Bloggerdb>>(){};
    List<Bloggerdb> data = new ArrayList<Bloggerdb>();
    data = (response.getEntity(genericType));
    System.out.println("Retreiving and Displaying Player Details");
    for(Bloggerdb b:data){
       System.out.println("Content: "+b.getContent());
       System.out.println("Username: "+b.getUsername());
       System.out.println("Password:"+b.getPassword());
    }
    System.out.println("Data Retreived!!");
```

}



Practical-4

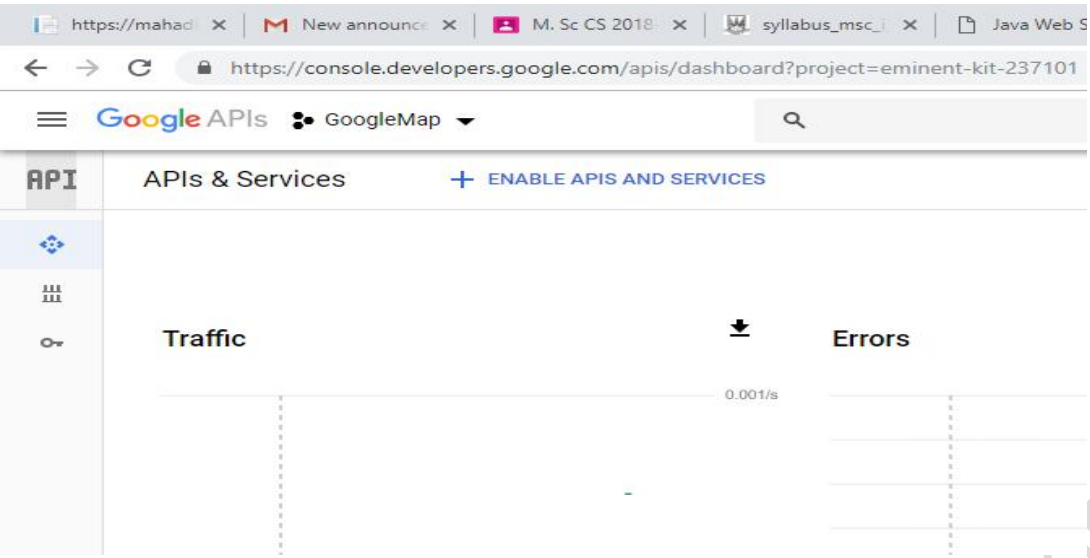
Develop application to consume Google's search / Google's Map RESTful Web service.

- Develop application to consume Google's search / Google's Map RESTful Web service.

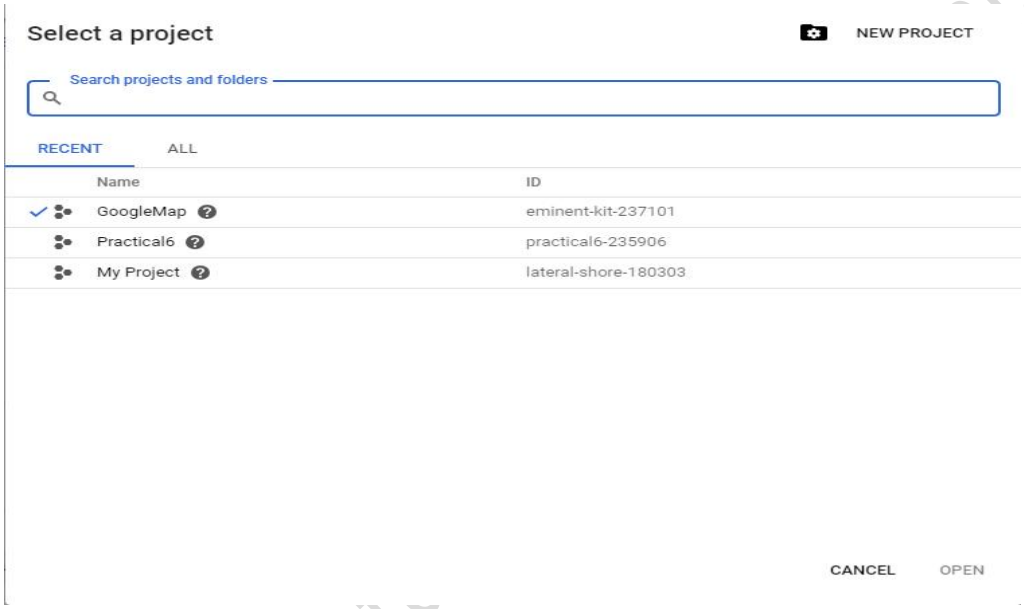
1. First of all we need to create an Java Web Application with any name, let it be GoogleMap here using Netbeans IDE.
2. The code inside the input.jsp will be similar to this input.jsp Input.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <form action="index.jsp">
      <pre>
        Enter latitude:<input type="text" name="t1" />
        Enter longitude:<input type="text" name="t2" />
        <input type="submit" value="Show" />
      </pre>
    </form>
  </body>
</html>
```

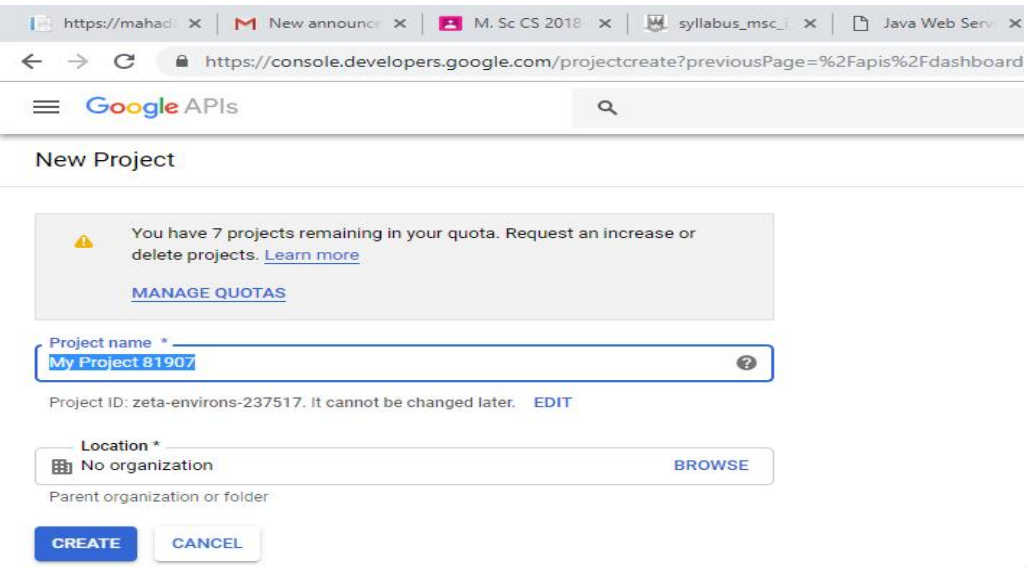
3. Before running the application we need the Google API key. The steps are shown here: - Visit Google APIs Console (https://console.developers.google.com, you have to login with your Google account).



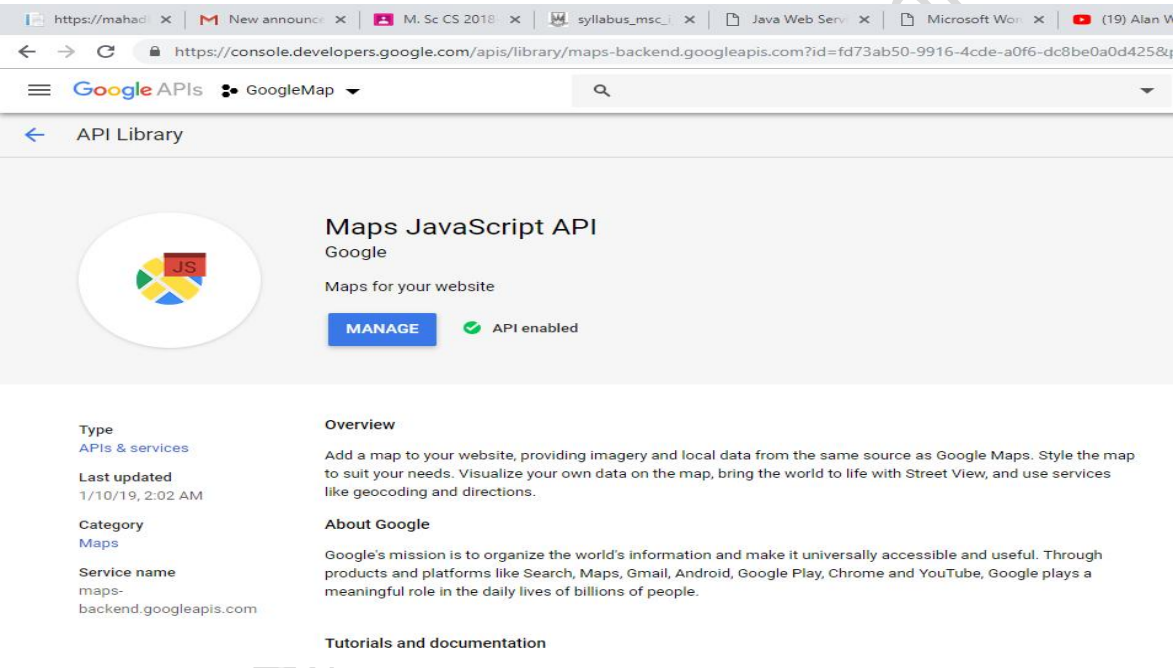
- Create a new API Project.



- Enter the name to your project.



- Enable the Google Maps API V3.



4. Create another file index.jsp

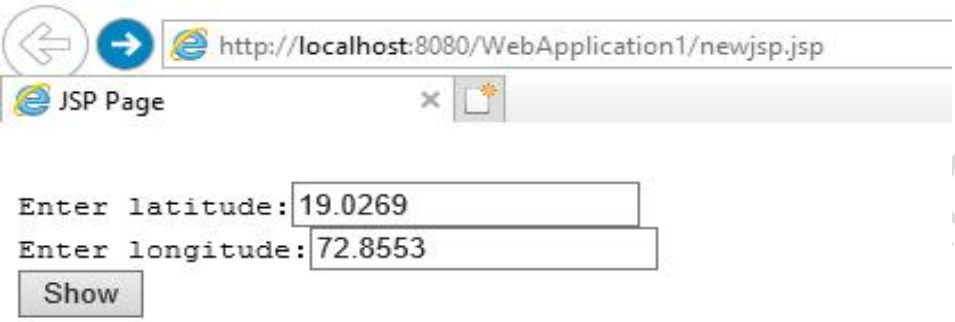
Index.jsp

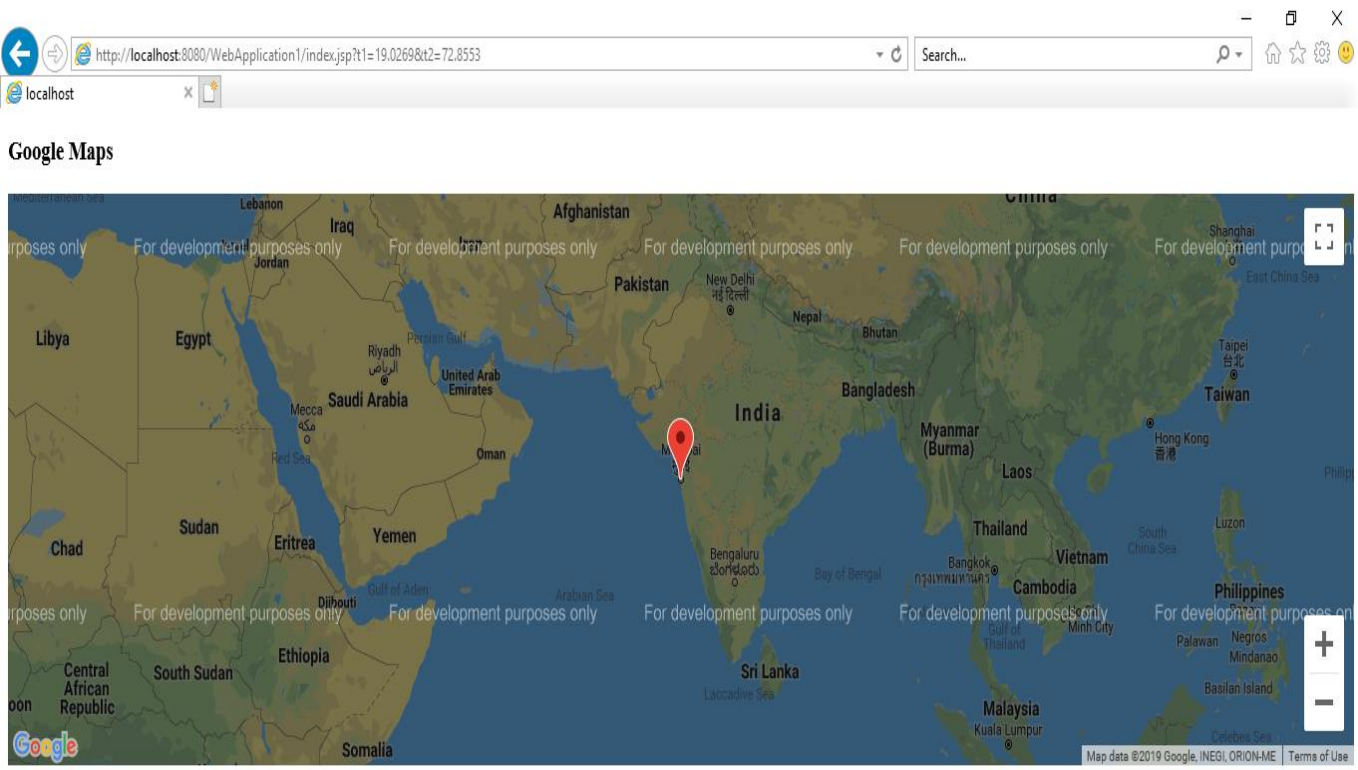
```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <style>
```

```
      #map {
           height: 400px;
           width: 100%;
          }
</style>
  </head>
  <body>
    <%
      double lati=Double.parseDouble(request.getParameter("t1"));
      double longi=Double.parseDouble(request.getParameter("t2"));
    %>
    <h3> Google Maps </h3>
    <div id="map"></div>
    <script lang="javascript">
      function initMap() {
      var info={lat: <%=lati%>, lng: <%=longi%>};
      var map = new google.maps.Map(document.getElementById('map'),
            {
               zoom: 4, center: info
            });
      var marker = new google.maps.Marker({
                position: info,
                map: map
                });


      }
    </script>
    <script async defer
        src="put your key here">
```

```
    </script>
  </body>
</html>
```

Output :-





Practical-5

Installation and Configuration of virtualization using KVM

Practical-6

Develop application to download image/video from server or upload image/video to server using MTOM techniques

MTOMClient
Index.jsp

```
<%@page import="java.io.BufferedOutputStream">
<%@page import="java.io.FileOutputStream">
<%@page import="java.io.FileInputStream">
<%@page import="java.io.BufferedInputStream">
<%@page import="javax.imageio.stream.FileImageInputStream">
<%@page import="java.io.File">
<%@page import="javax.xml.ws.soap.MTOMFeature">
<%@page contentType="text/html" pageEncoding="UTF-8">
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>JSP Page</title>
</head>
<body>
```

```
<%-- start web service invocation --><hr/>
<%
try {
pkg.ImageWS_Service service = new pkg.ImageWS_Service();
pkg.ImageWS port = service.getImageWSPort(new MTOMFeature(60000));
// TODO initialize WS operation arguments here
String filePath="c:/msc/ABC.jpg";
File file=new File(filePath);
FileInputStream fis=new FileInputStream(file);
BufferedInputStream bis=new BufferedInputStream(fis);
java.lang.String filename = file.getName();
byte[]imageBytes=new byte[(int)file.length()];
bis.read(imageBytes);
port.upload(filename, imageBytes);
bis.close();
out.println("File uploaded :"+filePath);
} catch (Exception ex) {
// TODO handle custom exceptions here
}
>
<%-- end web service invocation --><hr/>

<%-- start web service invocation --><hr/>
<%
try {

pkg.ImageWS_Service service = new pkg.ImageWS_Service();
pkg.ImageWS port = service.getImageWSPort();
// TODO initialize WS operation arguments here
java.lang.String filename = "ABC.jpg";
String filePath="c:/msc/download/"+filename;
// TODO process result here
byte[] fileBytes = port.download(filename);
FileOutputStream fos=new FileOutputStream(filePath);
BufferedOutputStream bos=new BufferedOutputStream(fos);
bos.write(fileBytes);
bos.close();
out.println("File downloaded"+filePath);
} catch (Exception ex) {
// TODO handle custom exceptions here
}
>
<%-- end web service invocation --><hr/>
</body>
</html>
MTOMServer
ImageWS.java
package mypkg;
import java.io.*;
import javax.jws.Oneway;
```

```
import javax.jws.WebService;
import javax.jws.WebMethod;
import javax.jws.WebParam;
import javax.xml.ws.soap.MTOM;
@MTOM(enabled=true,threshold=60000)
@WebService(serviceName = "ImageWS")
public class ImageWS {
@WebMethod(operationName = "upload")
@Oneway
public void upload(@WebParam(name = "Filename") String Filename, @WebParam(name =
"ImageBytes") byte[] ImageBytes){
String filePath="C:/MSC/upload/"+Filename;
try
{
FileOutputStream fos=new FileOutputStream(filePath);
BufferedOutputStream bos=new BufferedOutputStream(fos);
bos.write(ImageBytes);
bos.close();
System.out.println("Recieved file :"+filePath);
}
catch(Exception ex)

{
System.out.println(ex);
}
}
@WebMethod(operationName = "download")
public byte[] download(@WebParam(name = "Filename") String Filename) {
String filePath="C:/MSC/upload/"+Filename;
System.out.println("Sending file :"+filePath);
try
{
File file=new File(filePath);
FileInputStream fis=new FileInputStream(file);
BufferedInputStream bis=new BufferedInputStream(fis);
byte[] fileBytes=new byte[(int)file.length()];
bis.read(fileBytes);
bis.close();
return fileBytes;
}
catch(Exception ex)
{
System.out.println(ex);
}
return null;
}
}
```

Output:

Practical-07

Implement FOSS-Cloud Functionality VSI (Virtual Server Infrastructure)
Infrastructure as a Service (IaaS), Creating Virtual Machine or Storage

FOSS Cloud Installation

Steps:

1. Choose your keymap. 2. Confirm that you want to start: yes

3. Choose Demo-System: 1

4. Choose a Block-Device: sda

5. Confirm that you want to continue: yes

6. Confirm that you want to continue: yes

7. Choose the network interface: eth0

8. Choose if you want to use automatic network configuration: Yes

9. Reboot your system: yes

10. Login as root and run "fc-node-configuration -n demo-system --password admin"

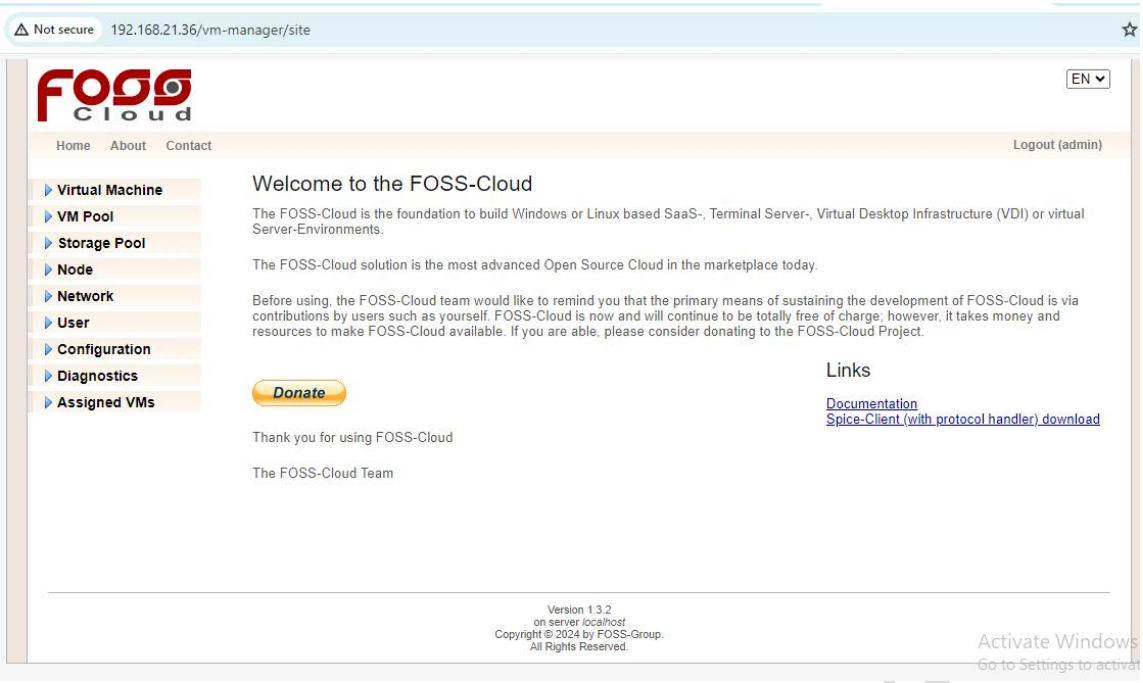
Note :- Above mentioned steps aren't mandatory you can start with the installation process of virt-viewer as shown below.

1. Install virt-viewer.

2. Install spice-client.0.6.3.

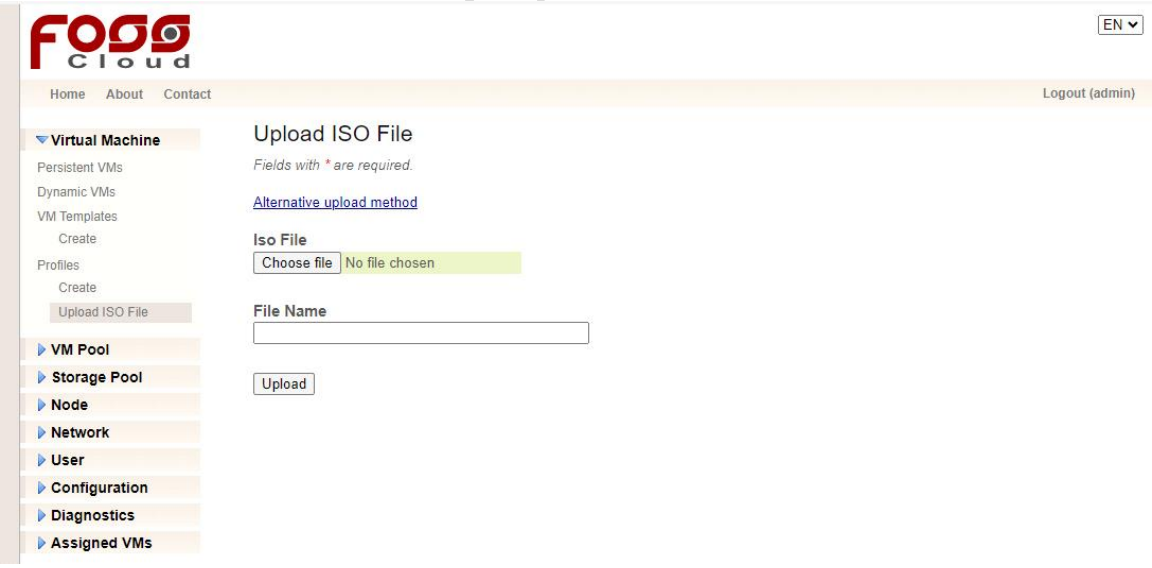
3. Open Browser.

- Once you open browser then on the search type**, 192.168.21.36**

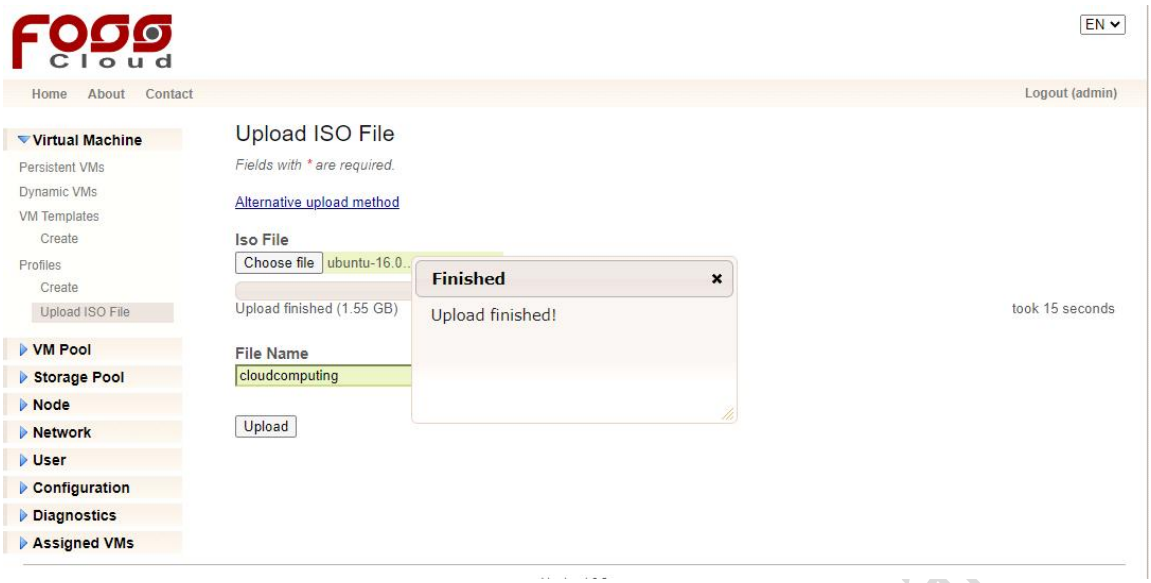


- **Uploading ISO files to Foss cloud**

  Go to **virtual machine→Profile→ Upload ISO file→file name**



Now choose the **ubuntu-16.04.5-desktop-i386 iso-file** from the FOSS cloud folder. Then, give your desired file name to it and click on the upload button**.**

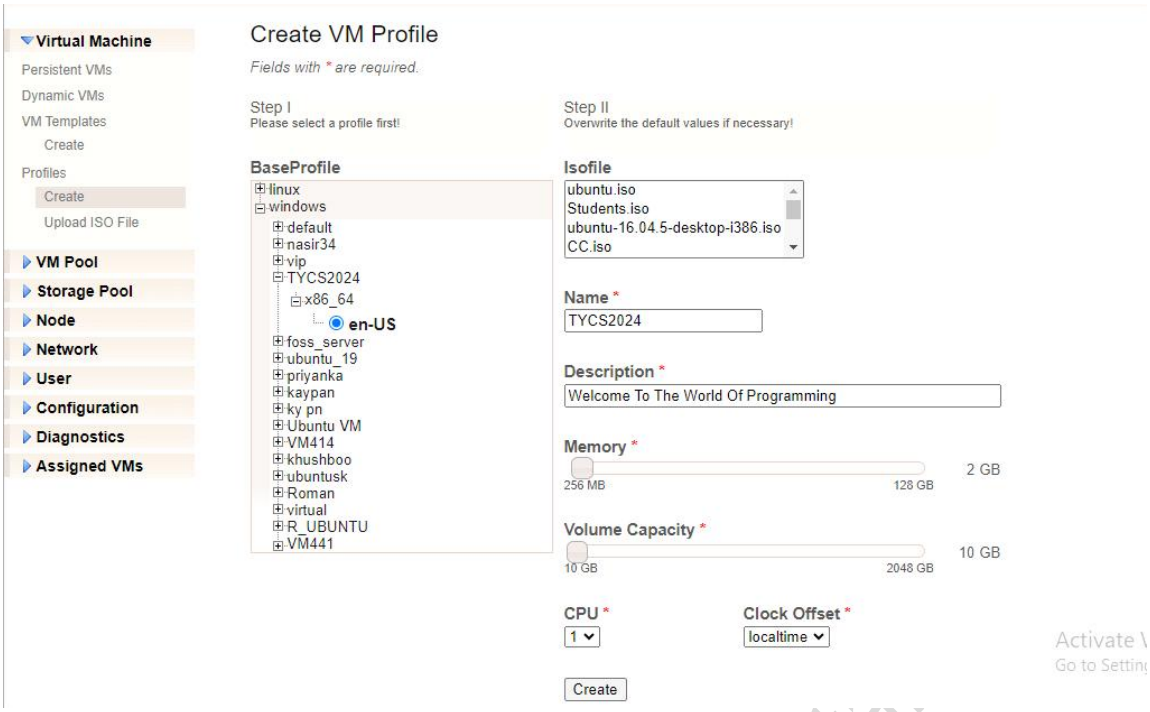


Once done with the upload process go to the create section in profiles.

Creating a Profile

The profile creates the relationship between the ISO file and the FOSS-Cloud.

1. Open Virtual Machines
2. Choose VM-Profiles
3. Choose the right Base Profile
4. Choose the right architecture (Windows only x86_64)
5. Chose the language (it is a information - not keyboard relevant)
6. Choose the ISO file (which you gave in file name tab)
7. Fill out name and description
8. Choose the amount of memory and volume capacity
9. Choose amount of CPU
10. Choose clock offset (normally Windows is "localtime" and Linux is "utc")



Now, we will create a VM template.

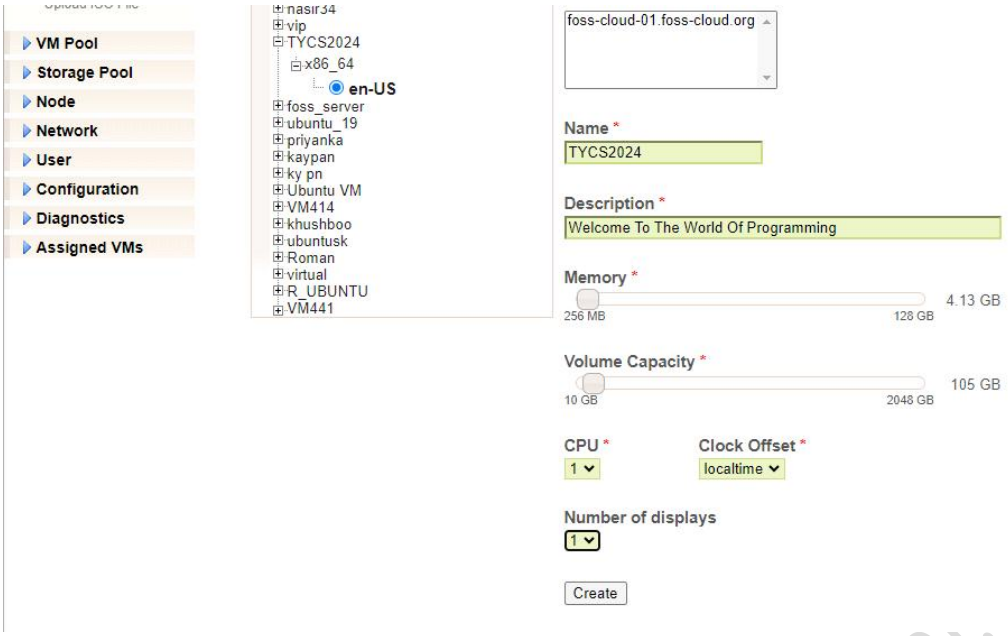
Creating Template

1. Choose the profile you have prepared before.

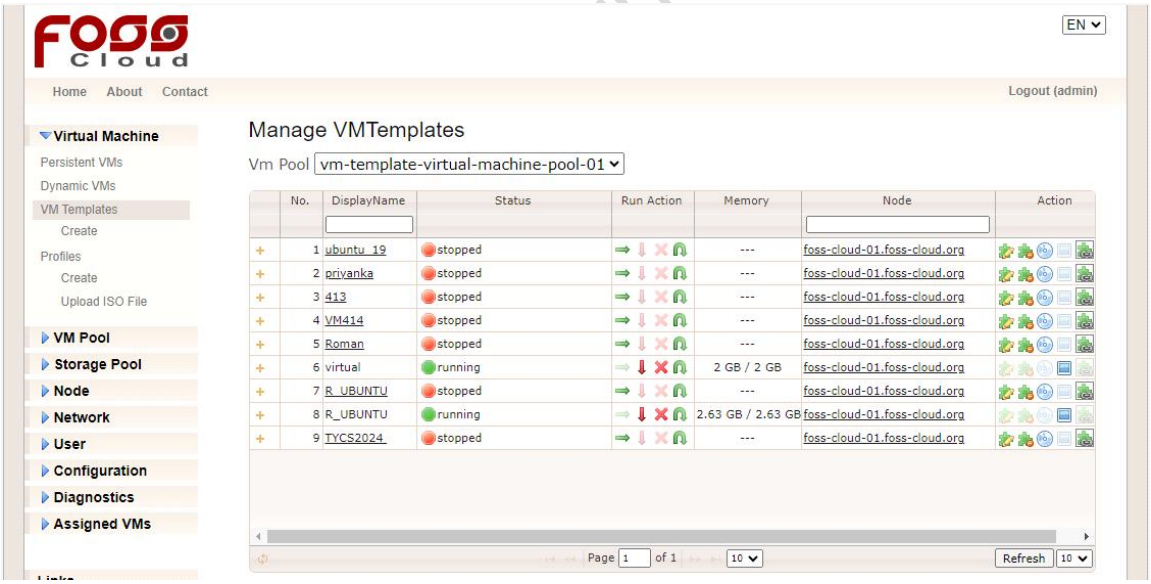
2. Add the VM-pool and one or more nodes, where you will run this VM (when the chosen VM-pool has only one node assigned, you don't have a choice)

3. You can change all the other information you have entered before

Click on "create" and the template is ready for installing the guest operating system.

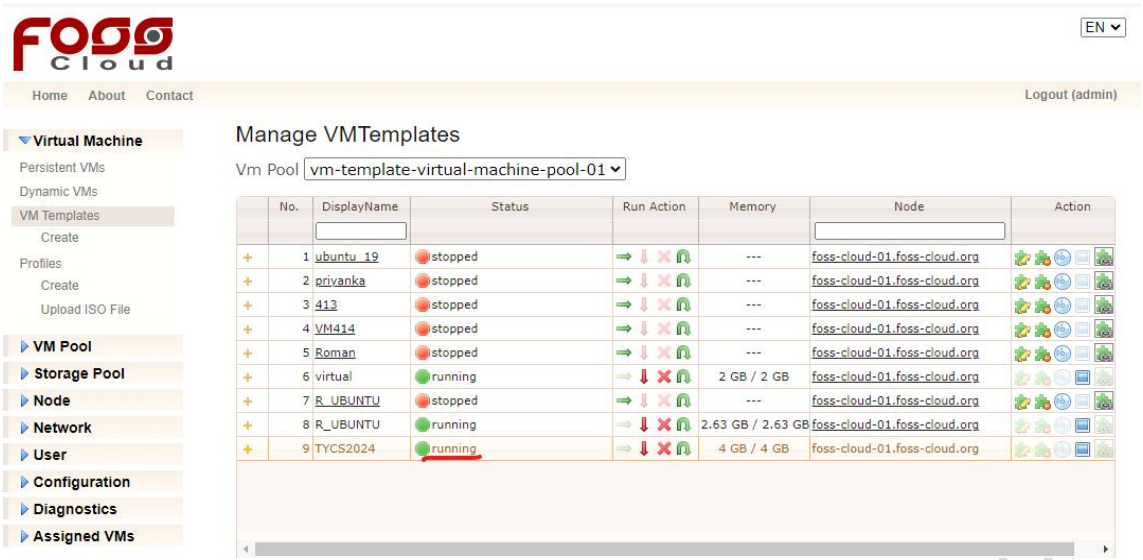


Once you create your virtual machine template you will be able to see your **VM template.**

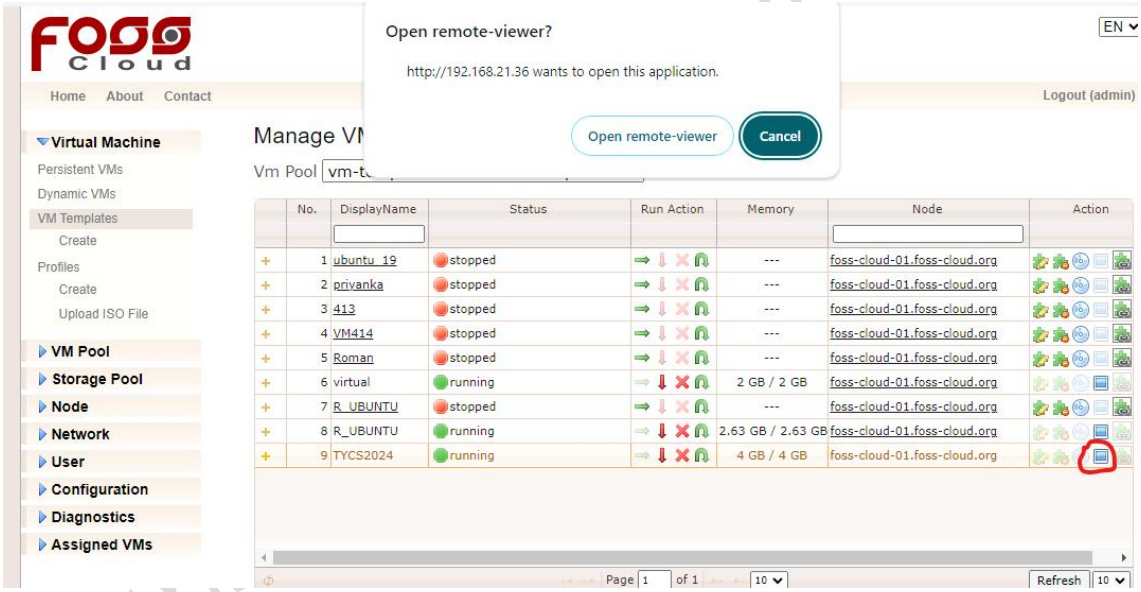


As you can see the last row of Display column our template is created.

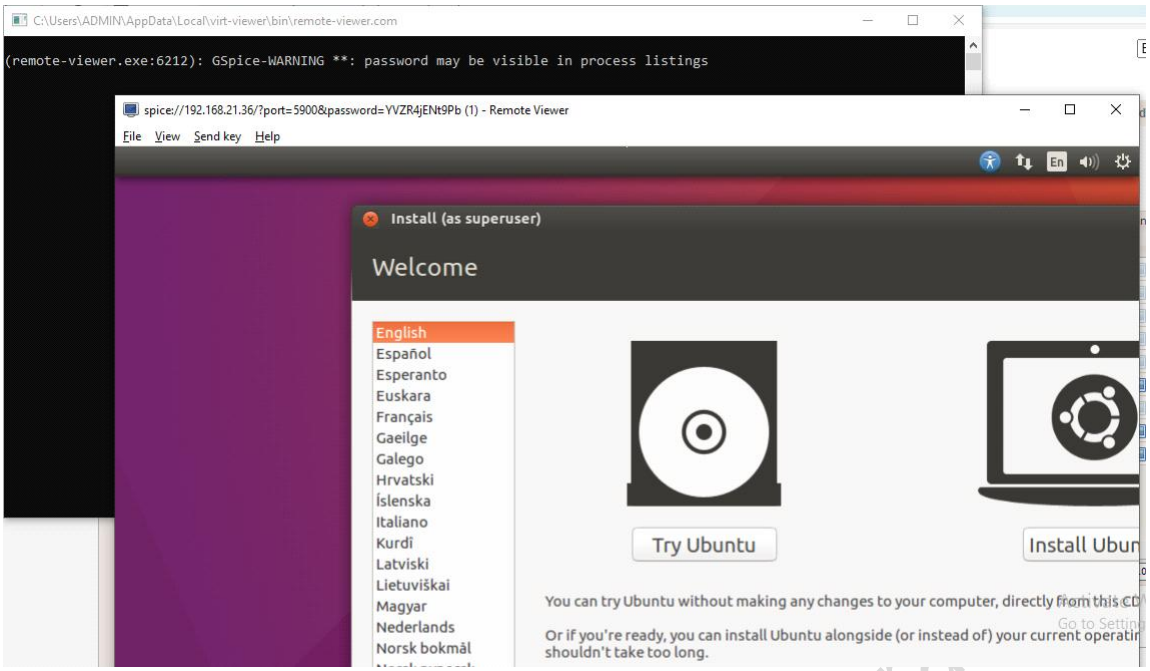
To update your template status, click on the green arrow.



Now click on Use Template in Action column of your corresponding template.

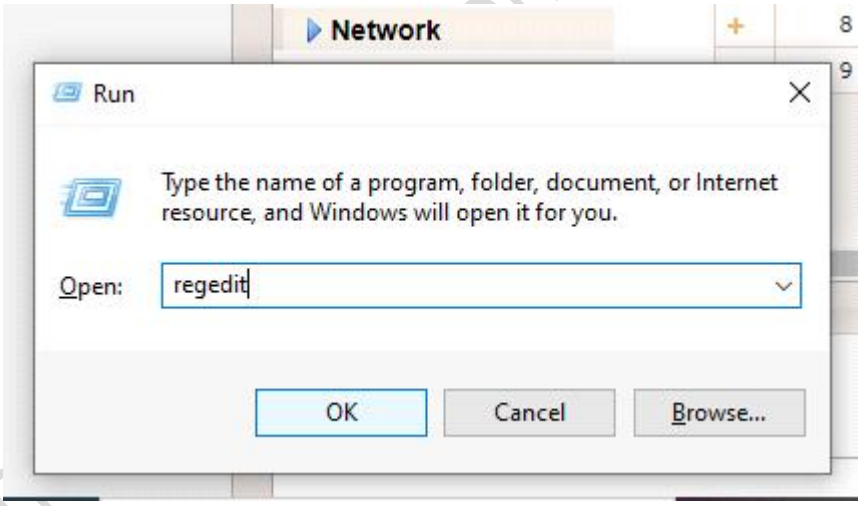


Just after clicking on, it a pop up would appear to Open remote-viewer? click on Open-remote-viewer button, you will see the following screen.



Note :- If you don't see the above screen follow the below given steps.

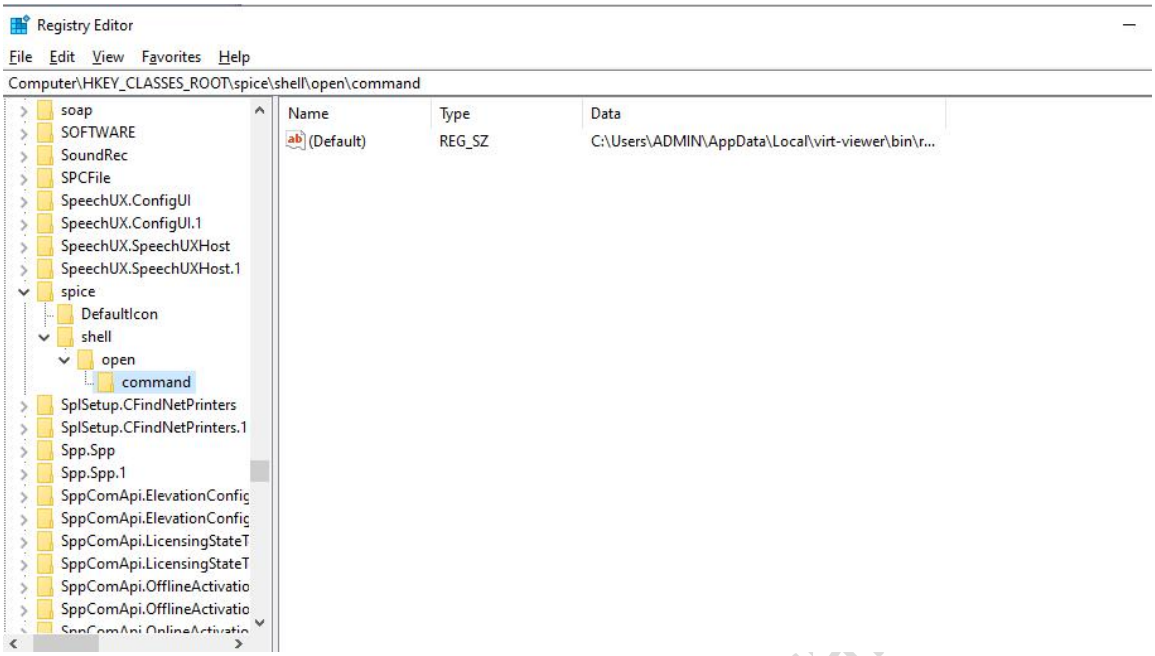
1.First press window + r, then type regedit and click ok.



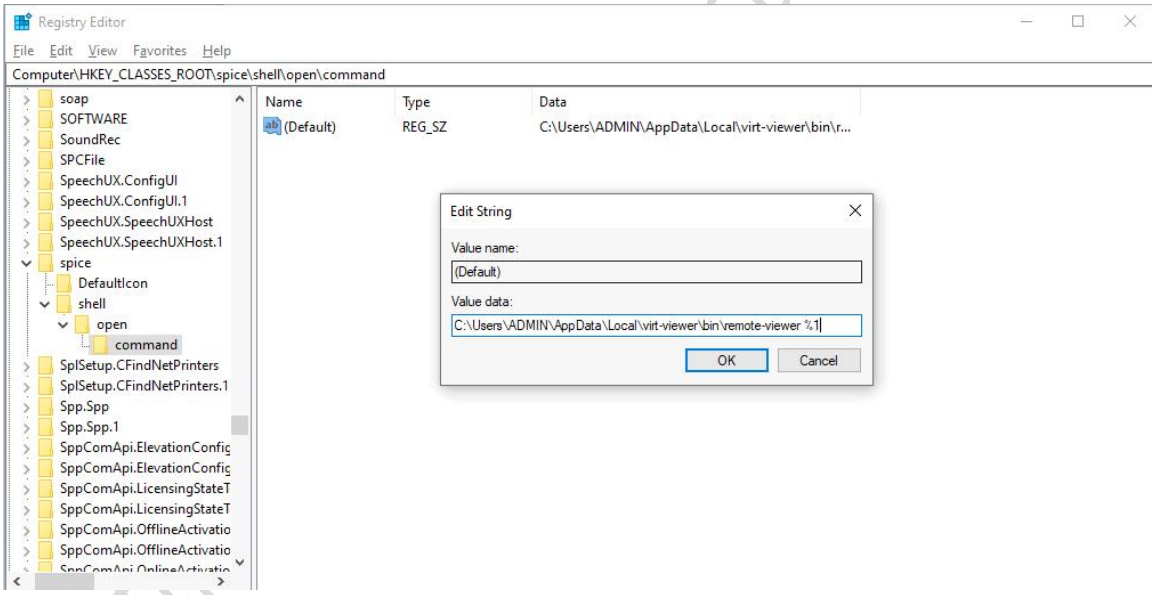
2.Further permissions tab will open then click yes, and a regedit editor will get open.

3.In the Registry Editor a list of directories would appear, in those lists of directories search for the spice directory.

4.Keep on expanding the spice directory until you reach the command section.

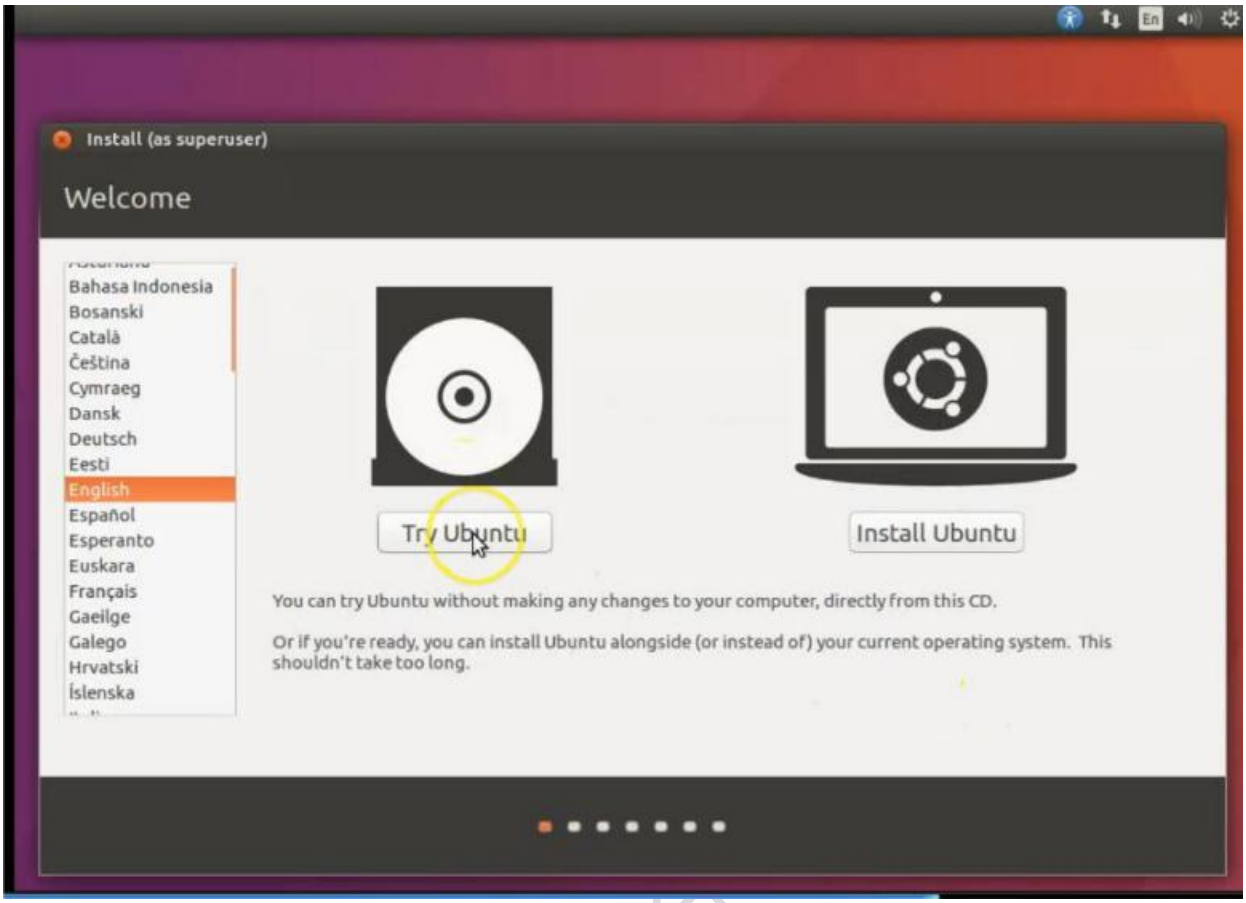


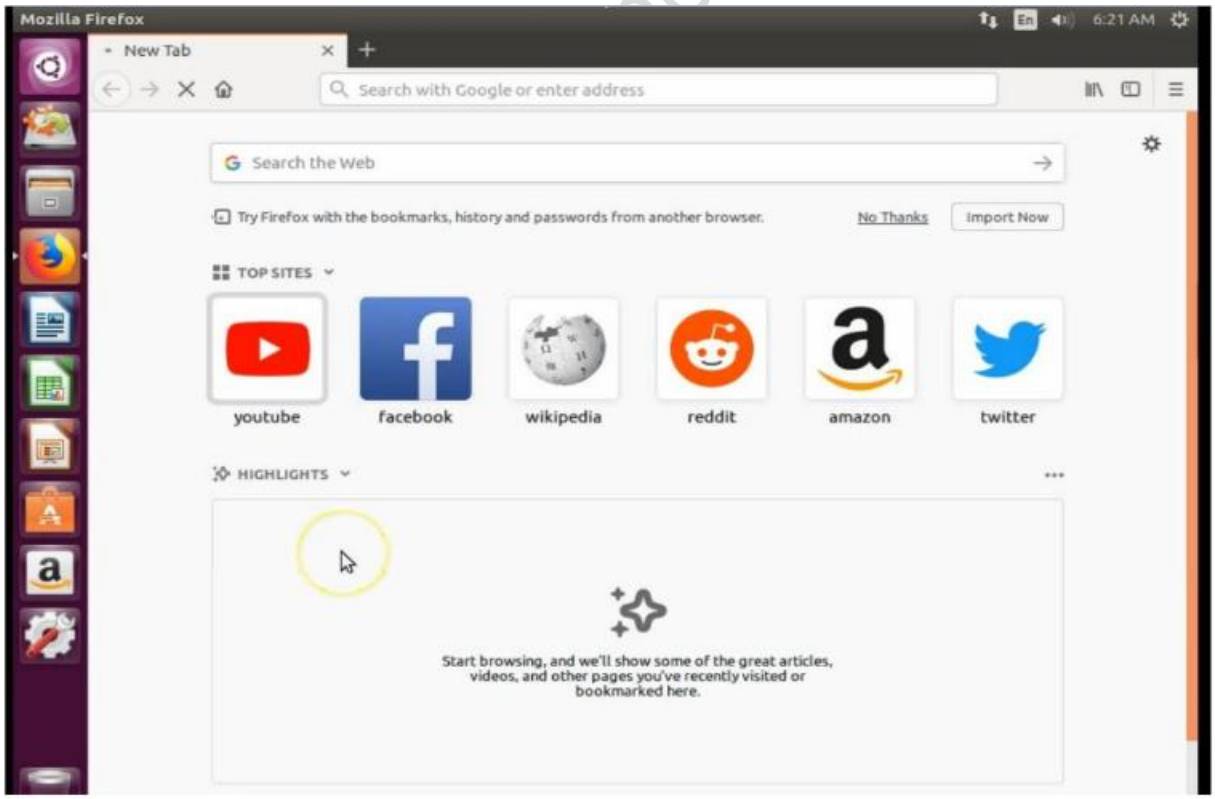
5. Then click on the default file and a pop up will appear, then you have to paste the path **C:\Users\ADMIN\AppData\Local\virt-viewer\bin** in the value data and **also type %1 in last**. Once done the above screen will appear.



Finally, after clicking on remote viewer button a command line come where a graphical control loading and getting connected will be displayed and then finally the ubuntu will get open.

On opening of ubuntu click on try ubuntu. Now, you can use ubuntu on your virtual machine.


Install (as superuser)
Welcome
Bahasa Indonesia
Bosanski
Català
Čeština
Cymraeg
Dansk
Deutsch
Eesti
English
Español
Esperanto
Euskara
Français
Gaeilge
Galego
Hrvatski
Íslenska
Try Ubuntu
Install Ubuntu
You can try Ubuntu without making any changes to your computer, directly from this CD.
Or if you're ready, you can install Ubuntu alongside (or instead of) your current operating system. This shouldn't take too long.

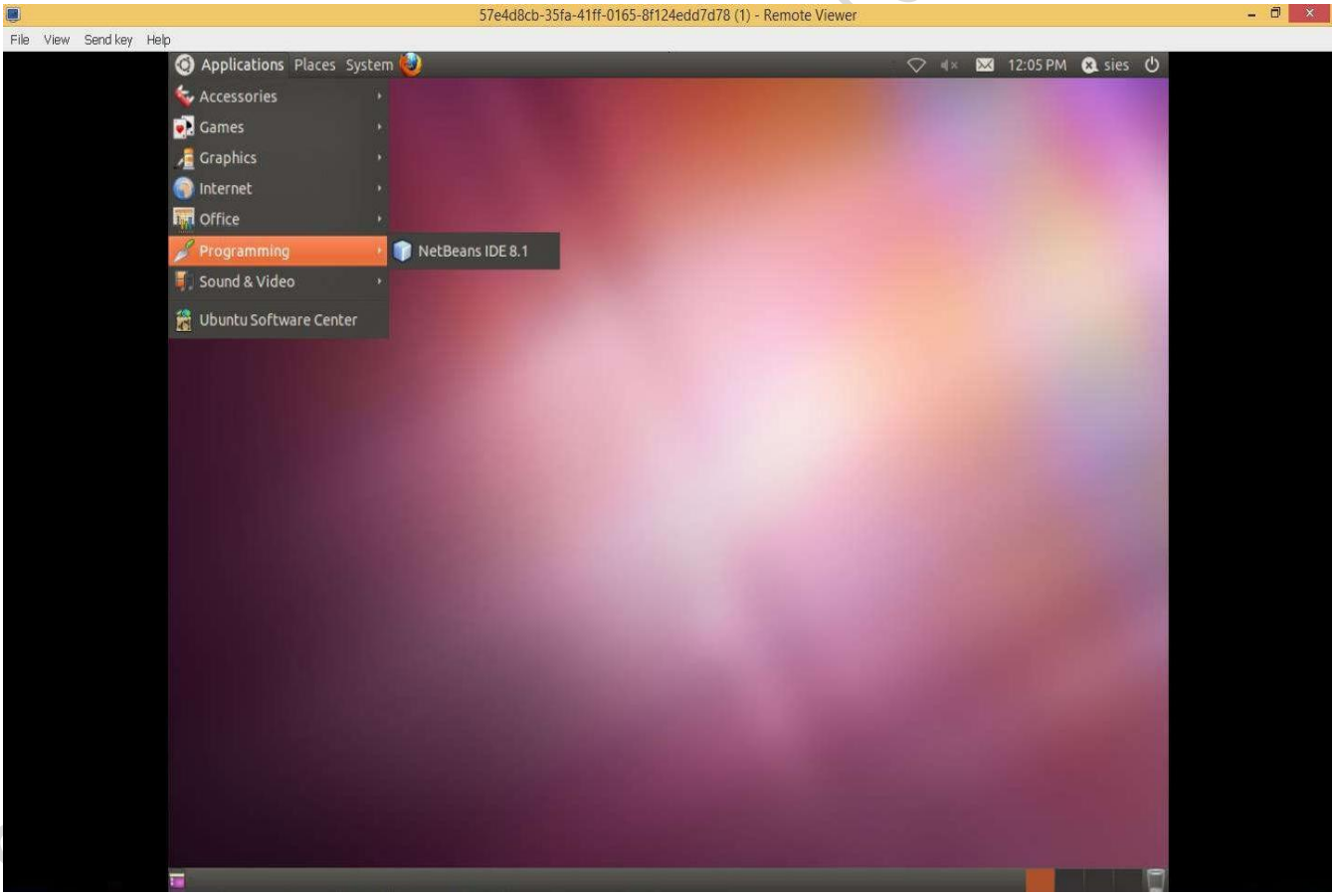

Mozilla Firefox
6:21 AM
New Tab
Search with Google or enter address
Search the Web
Try Firefox with the bookmarks, history and passwords from another browser.
No Thanks
Import Now
TOP SITES
youtube
facebook
wikipedia
reddit
amazon
twitter
HIGHLIGHTS
Start browsing, and we'll show some of the great articles, videos, and other pages you've recently visited or bookmarked here.

Practical-08

Implement FOSS-Cloud Functionality - VSI Platform as a Service (PaaS)

Software development Kits can be made available in the Virtual Machines that can be implemented as Platform as a Service.

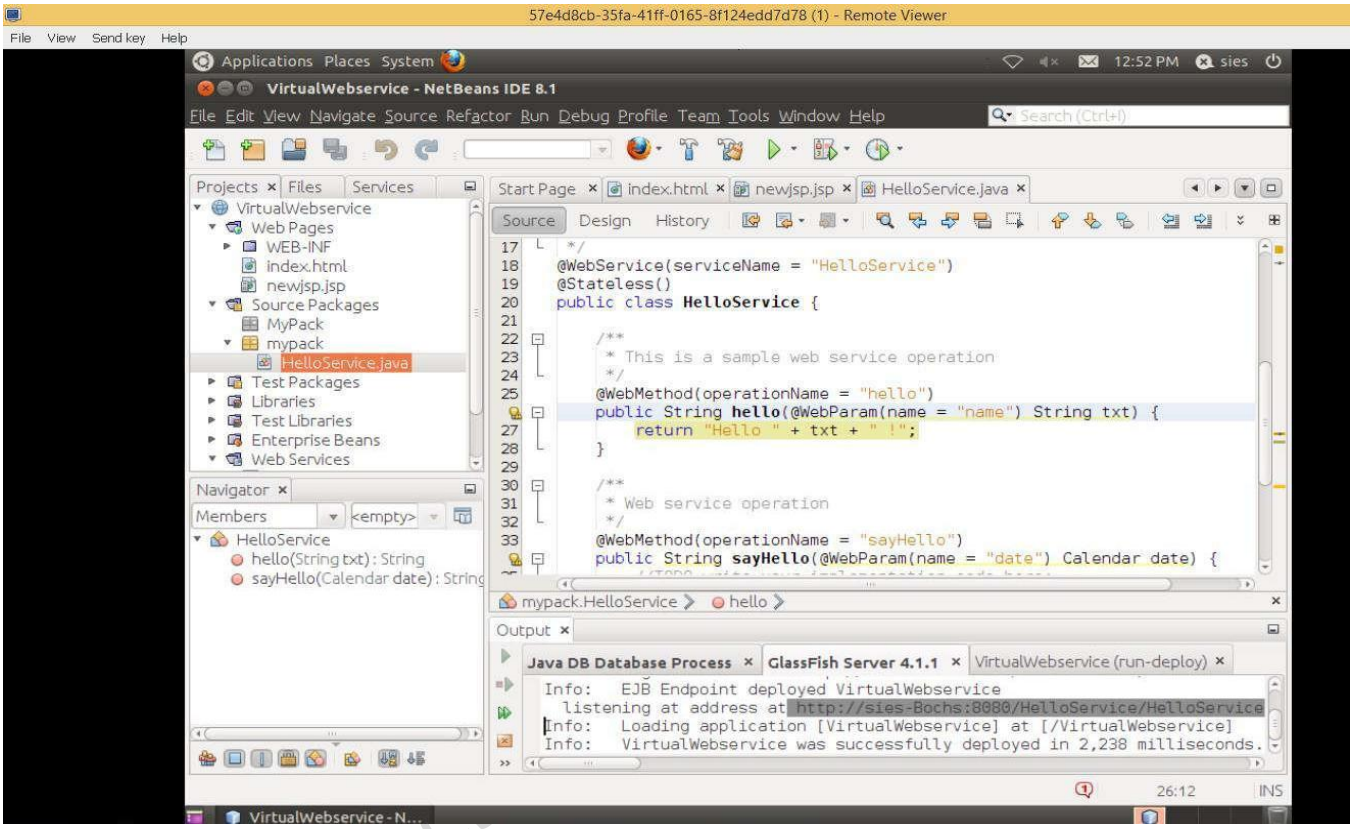
Installation of Netbeans, Eclipse, Visual Studio and DBMS can be done in the appropriate Virtual Machines.

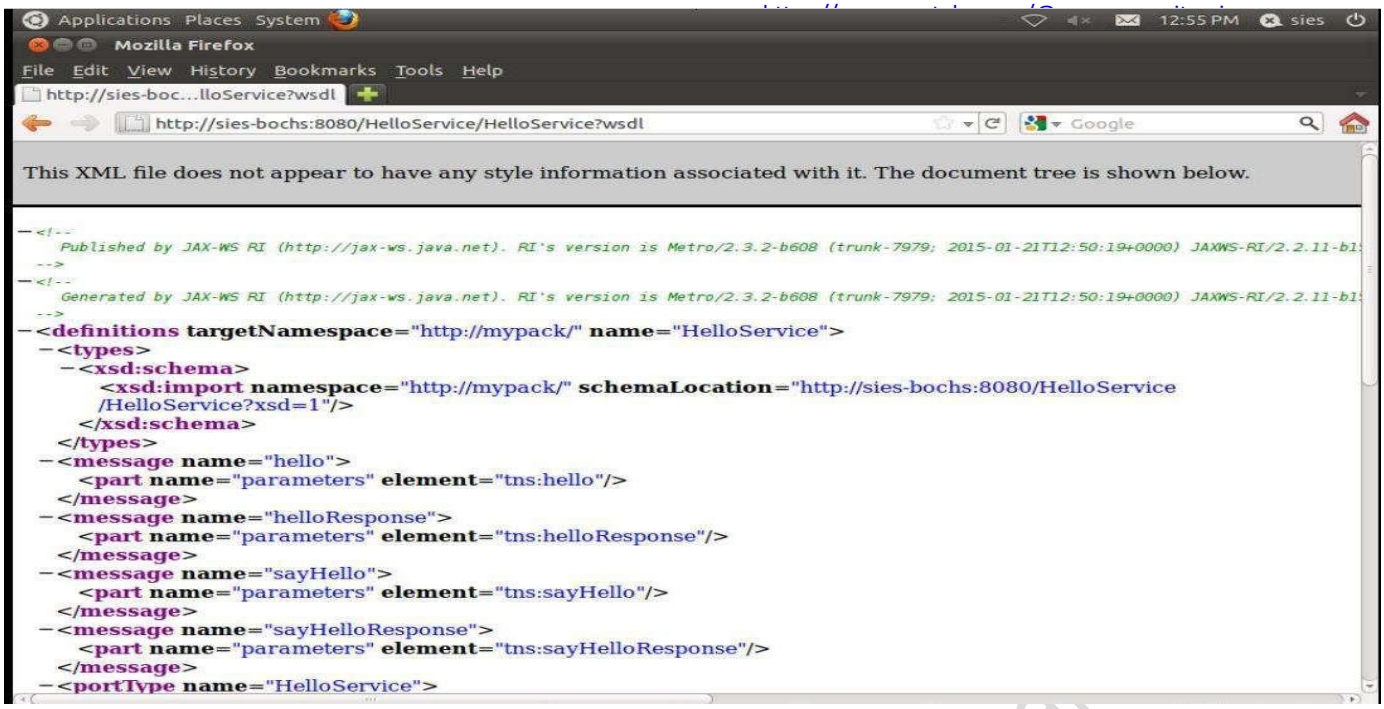


Aim: Implement FOSS-Cloud Functionality VSI Software as a Service (SaaS)

Applications created and deployed in the virtual machines can be accessed by outside world.

This can be implemented as Software as Service.




Applications Places System
12:55 PM
sies
Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://sies-boc...lloService?wsdl
http://sies-bochs:8080/HelloService/HelloService?wsdl
Google
This XML file does not appear to have any style information associated with it. The document tree is shown below.
<!-- Published by JAX-WS RI (http://jax-ws.java.net). RI's version is Metro/2.3.2-b608 (trunk-7979; 2015-01-21T12:50:19+0000) JAXWS-RI/2.2.11-b1
<!-- Generated by JAX-WS RI (http://jax-ws.java.net). RI's version is Metro/2.3.2-b608 (trunk-7979; 2015-01-21T12:50:19+0000) JAXWS-RI/2.2.11-b1
<definitions targetNamespace="http://mypack/" name="HelloService">
<types>
<xsd:schema>
<xsd:import namespace="http://mypack/" schemaLocation="http://sies-bochs:8080/HelloService
/HelloService?xsd=1"/>
</xsd:schema>
</types>
<message name="hello">
<part name="parameters" element="tns:hello"/>
</message>
<message name="helloResponse">
<part name="parameters" element="tns:helloResponse"/>
</message>
<message name="sayHello">
<part name="parameters" element="tns:sayHello"/>
</message>
<message name="sayHelloResponse">
<part name="parameters" element="tns:sayHelloResponse"/>
</message>
<portType name="HelloService">
https://study.cscornersunitarai