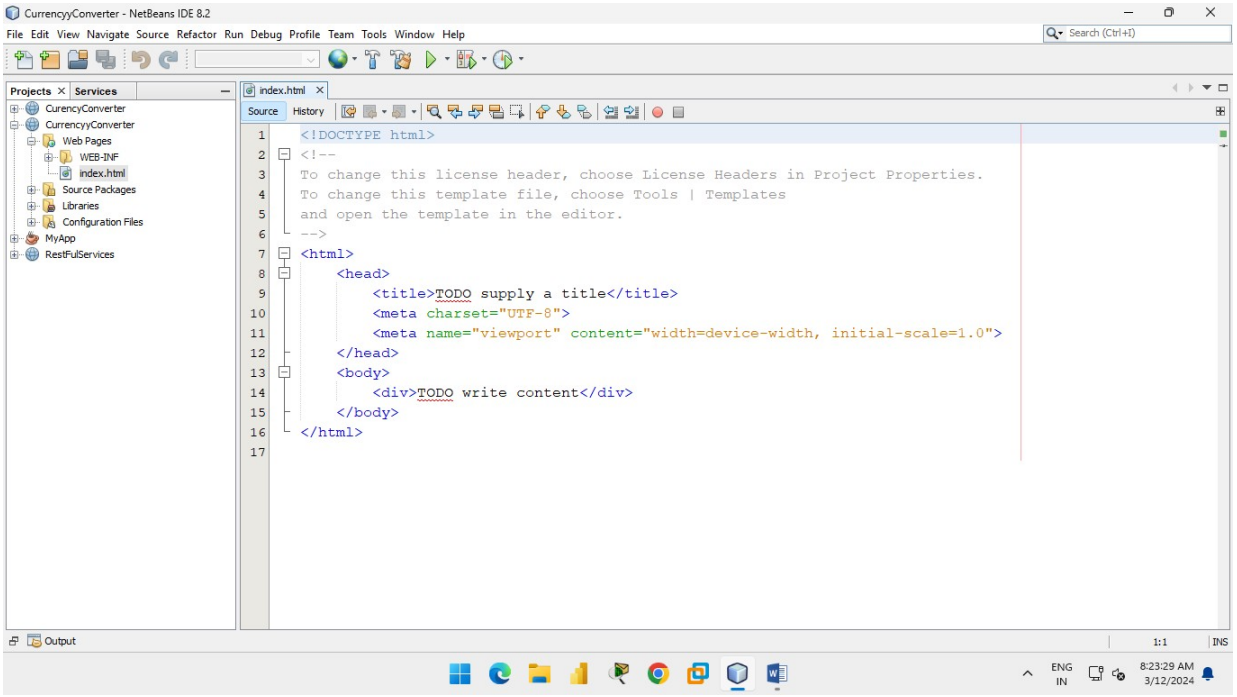
PRACTICAL -1

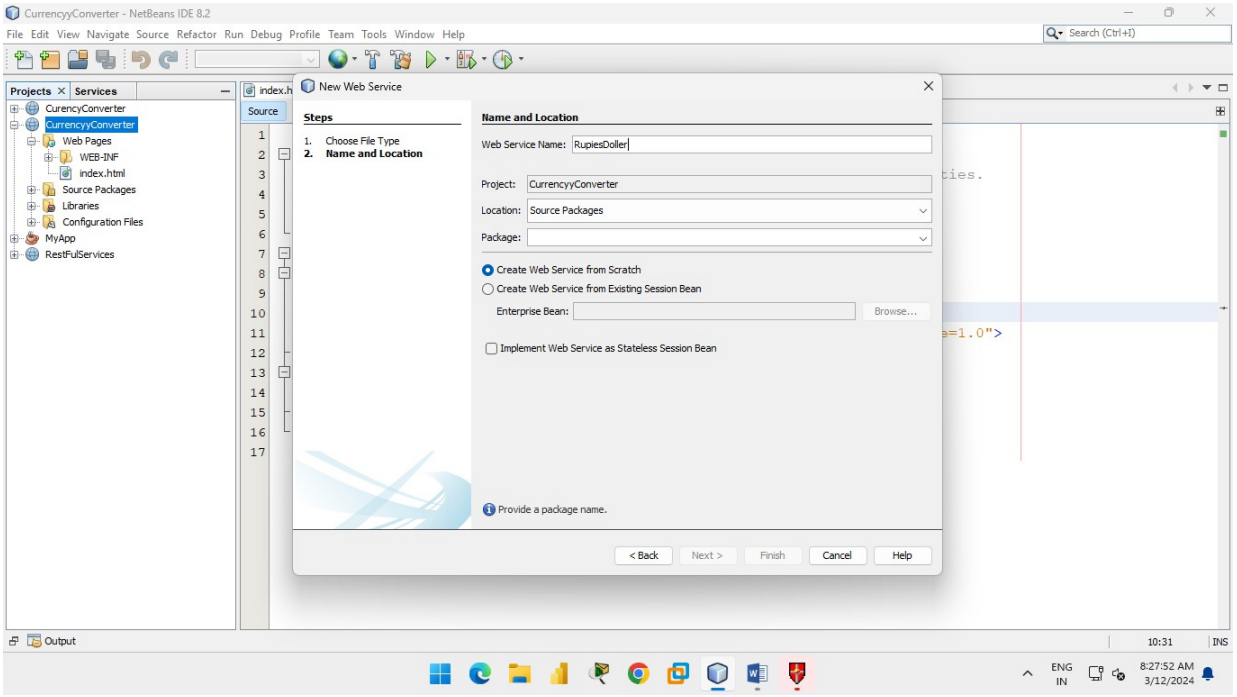
Aim – Define a simple services like Converting Rs into Dollar and Call it from differentplatform like JAVA and .NET Framework.

A] Convert Rupees into Dollar and Dollar into Rupees using Java.

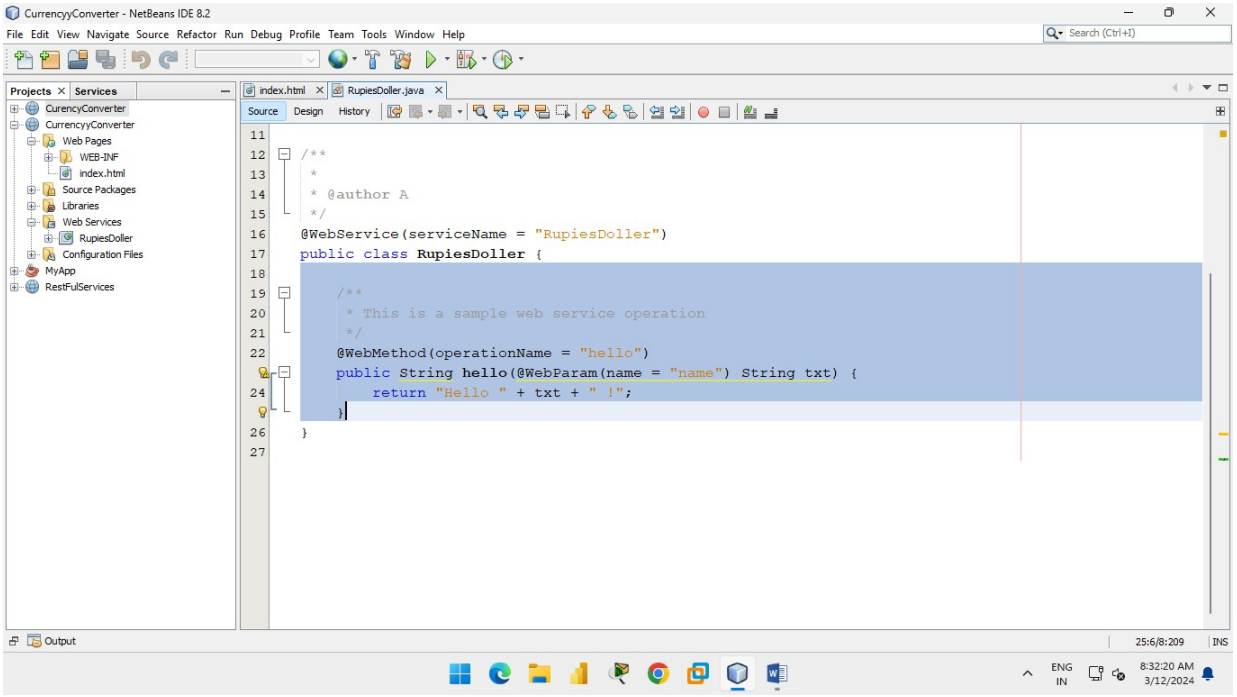
1. Open Netbins and create new project.
2. Java web→web application→Project name→Next→Finish



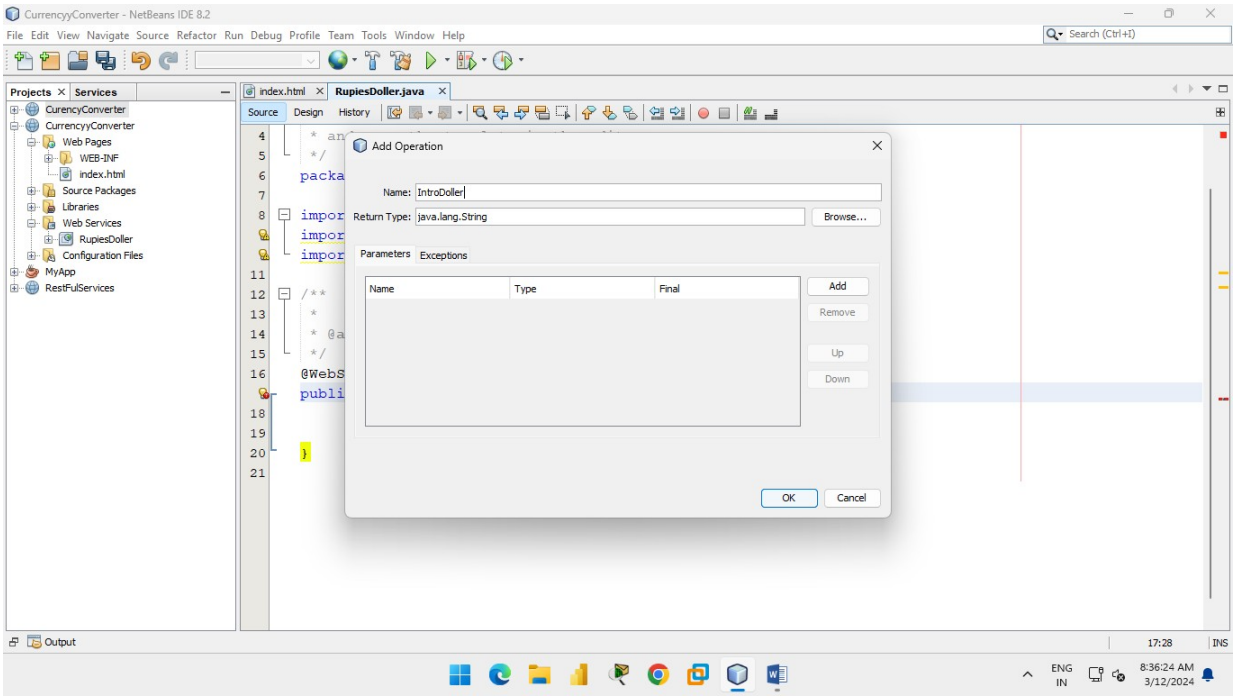
3. Right click on project→new→web service



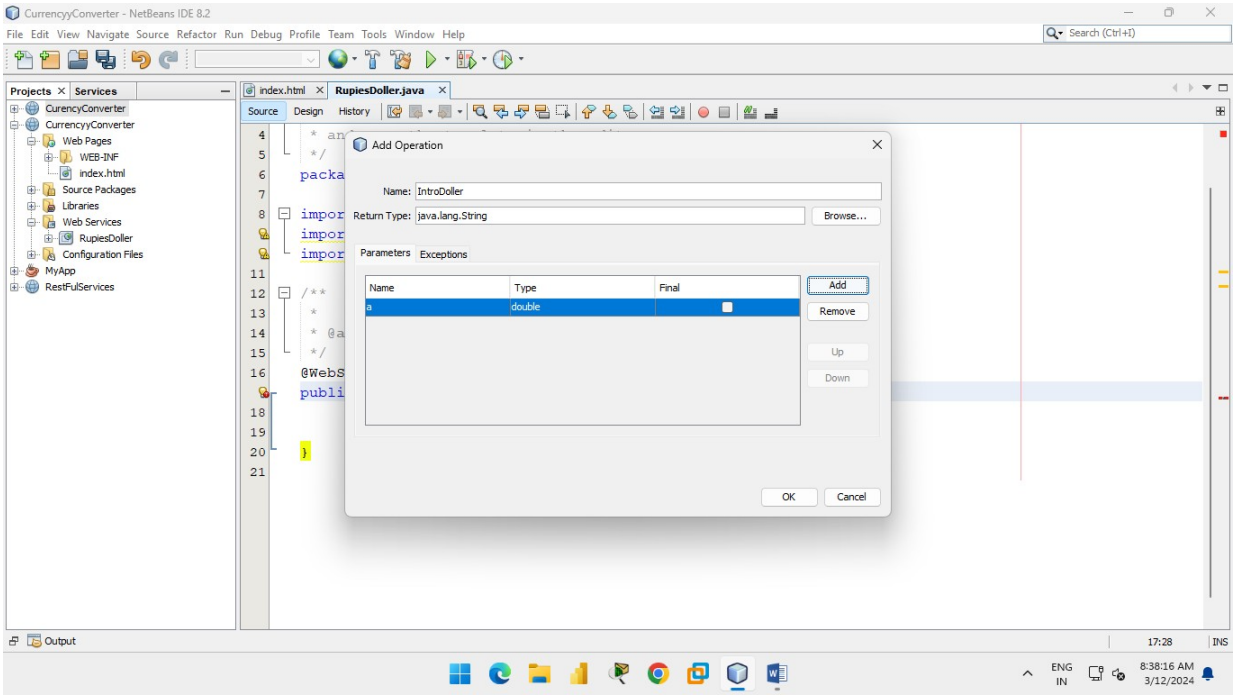
4. Now delete this block of code



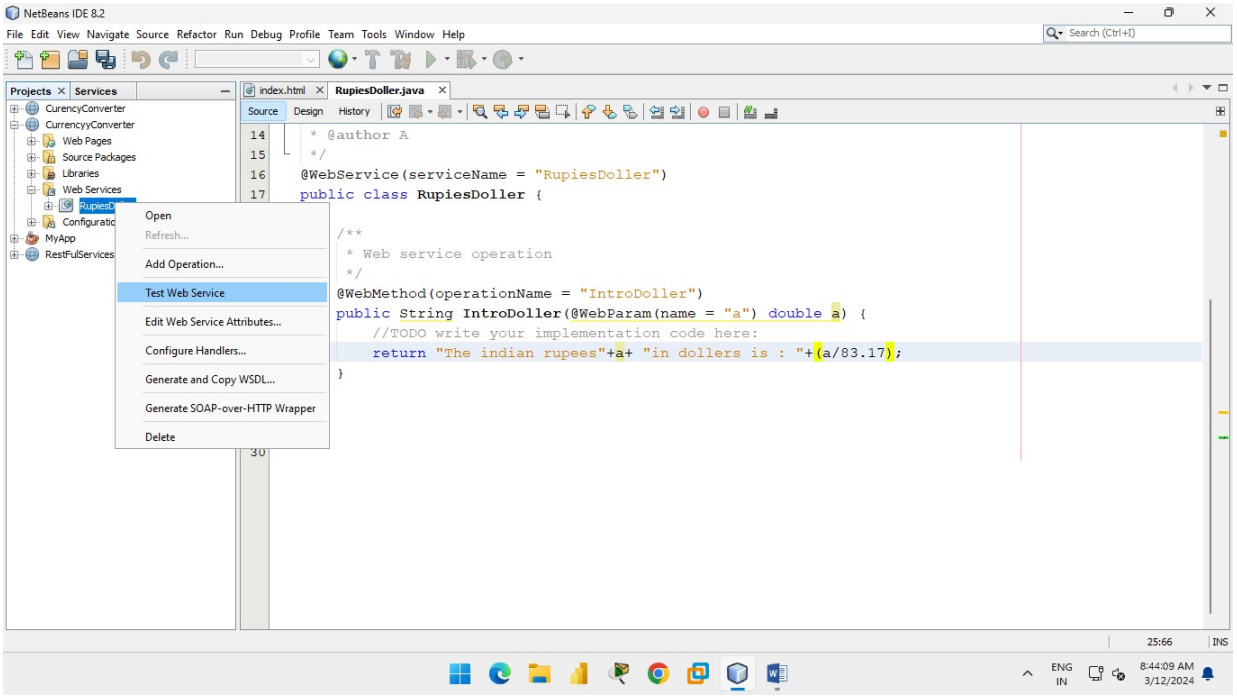
5. Right click→insert code→Add web service operations



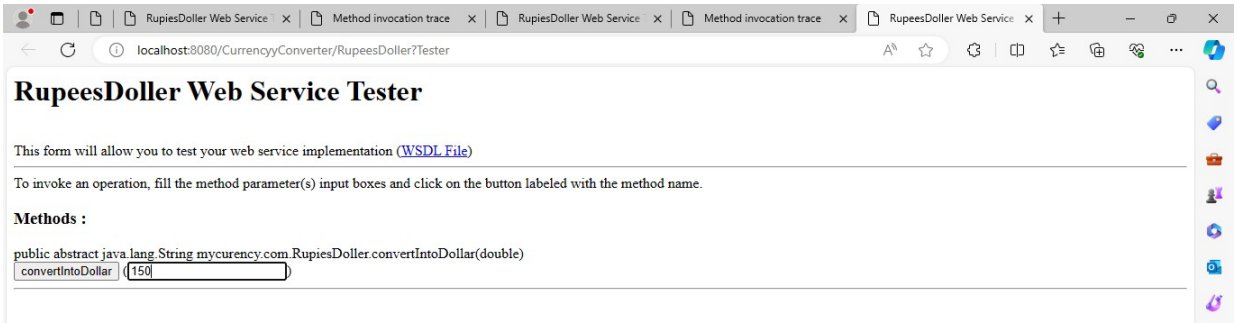
6. Give name→Add→

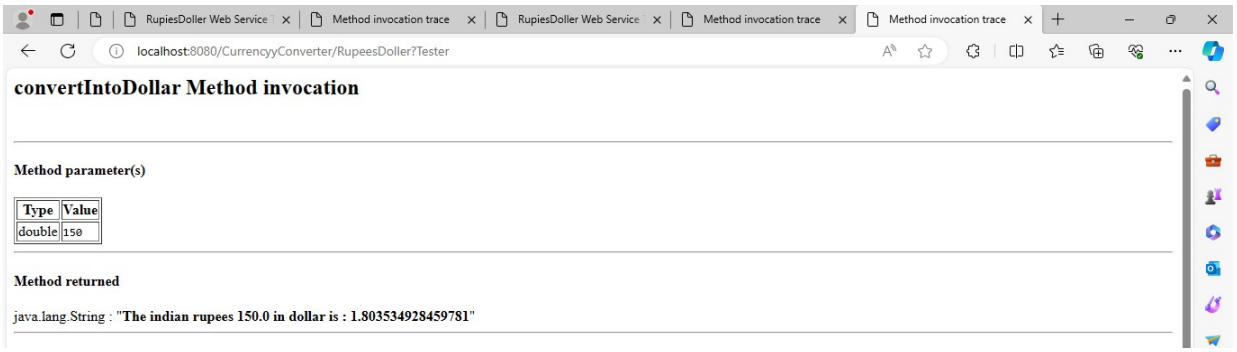


7. Right click on web service file→Test web service

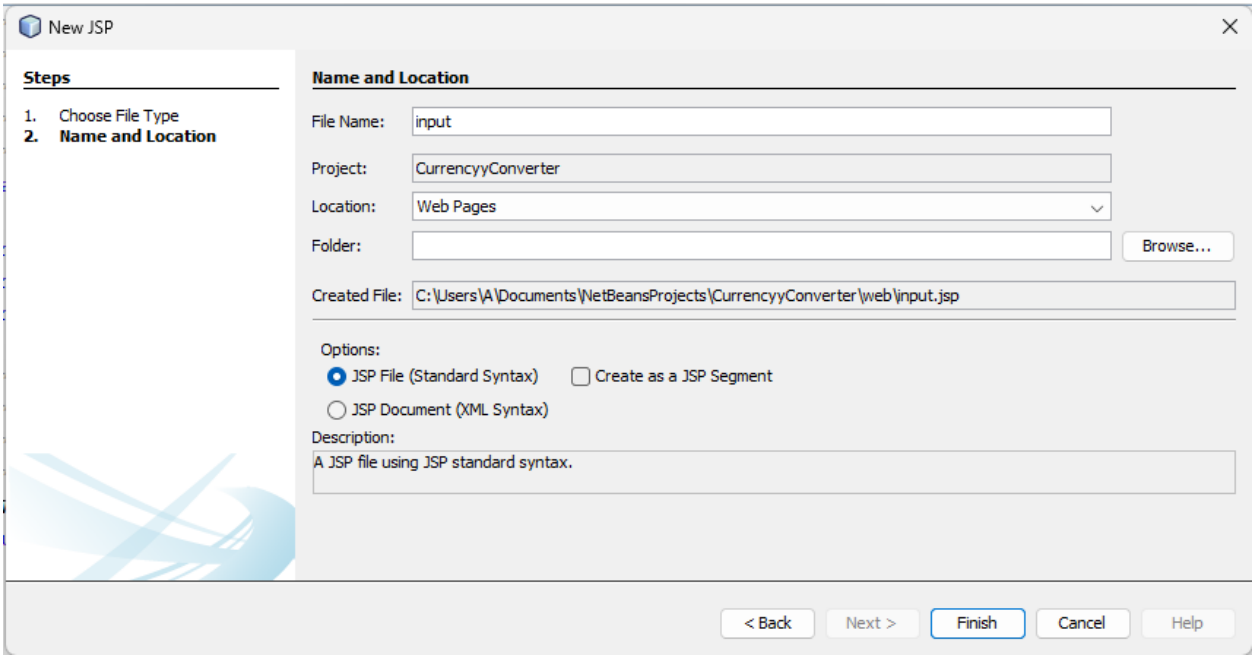


OUTPUT:

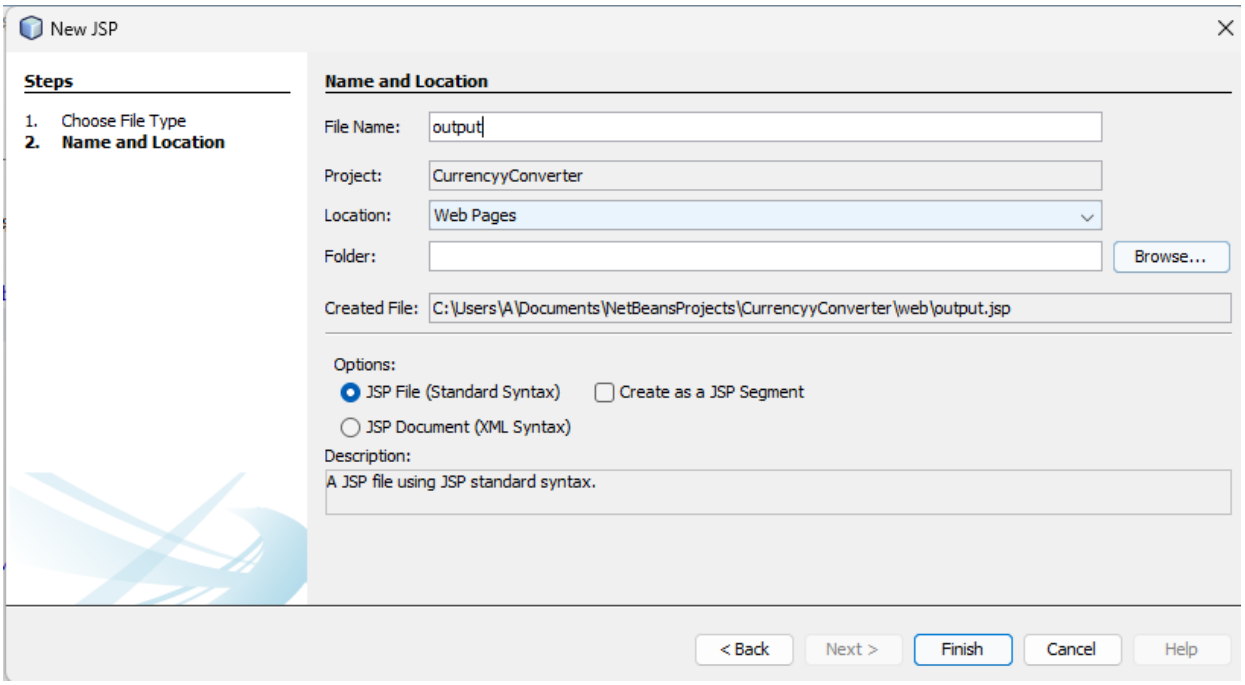


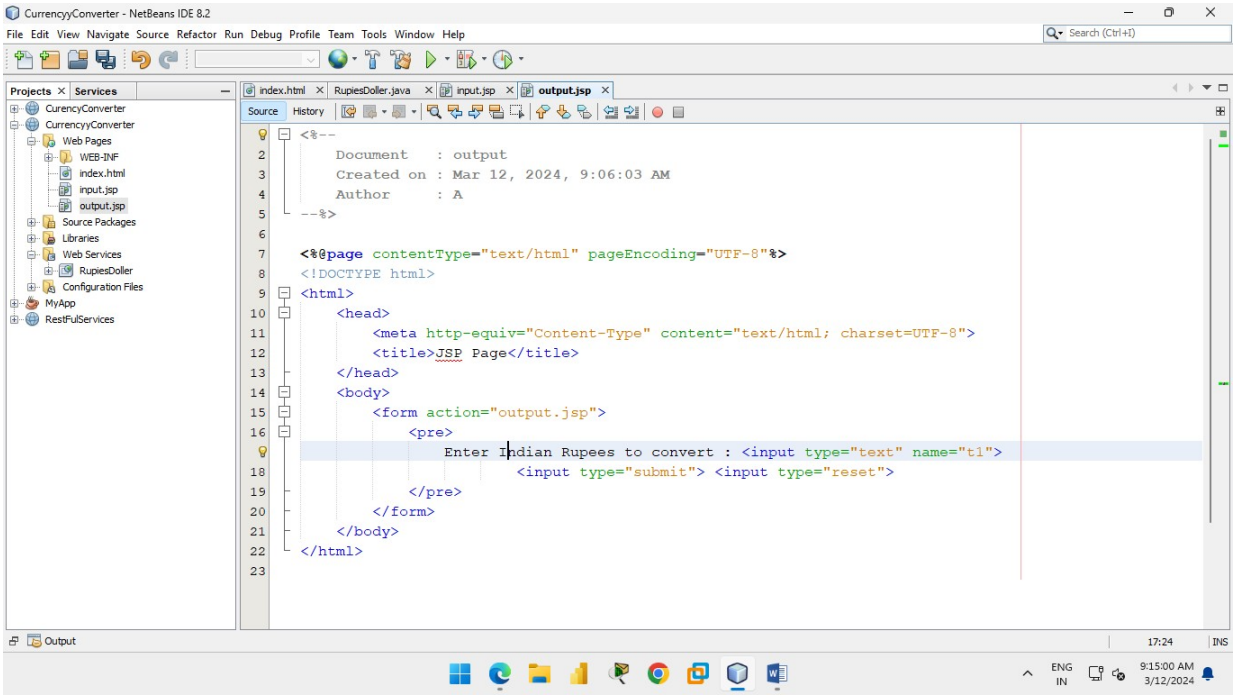


8. Right click on Web pages→new→JSP

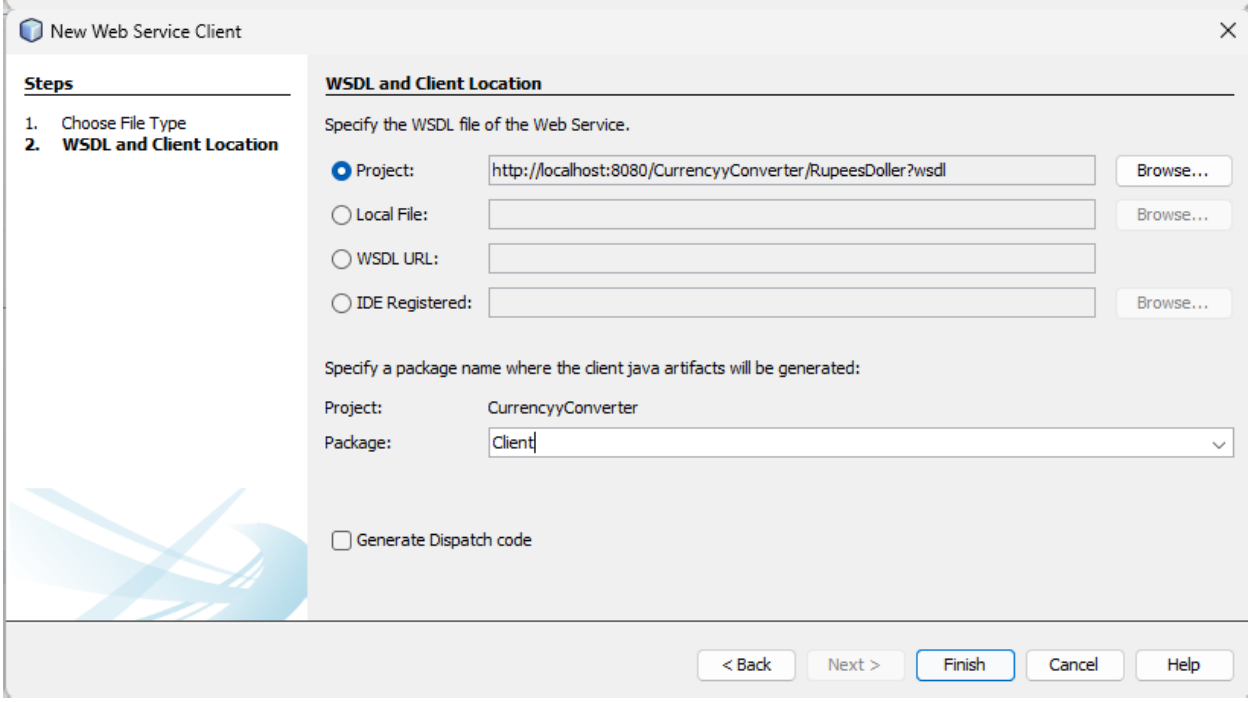


9. Follow the same steps.

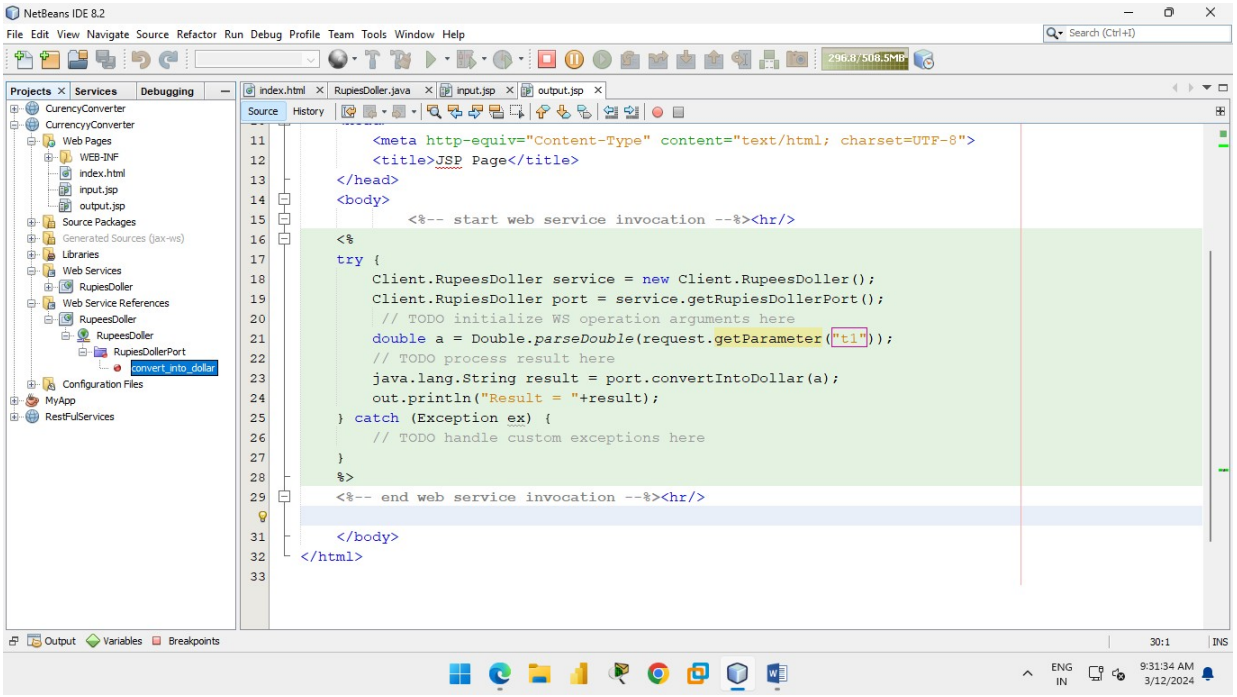




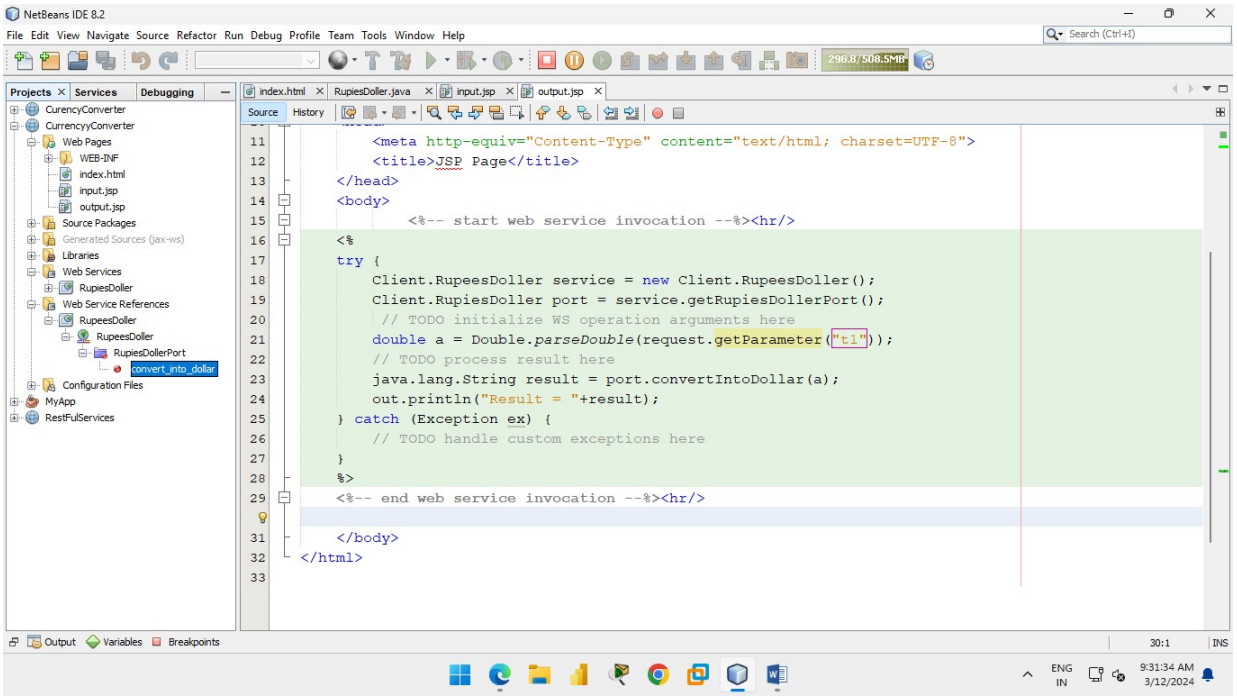
10. Write click on project→New→Web Service client→browse→ok



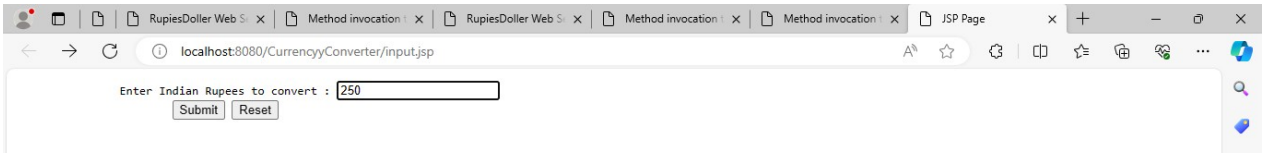
11. Drag the button in body tang of output.jsp file.

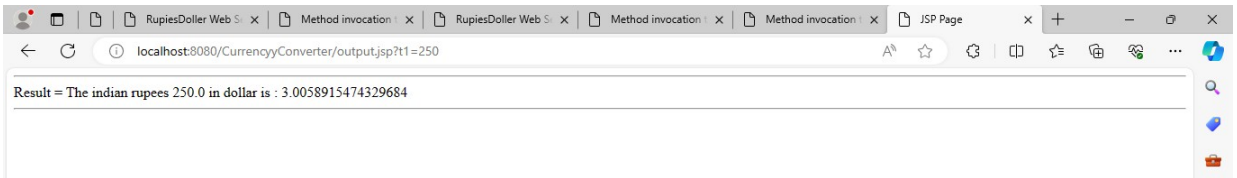


12. Right click on project→build→Right click on input.jsp→Run file



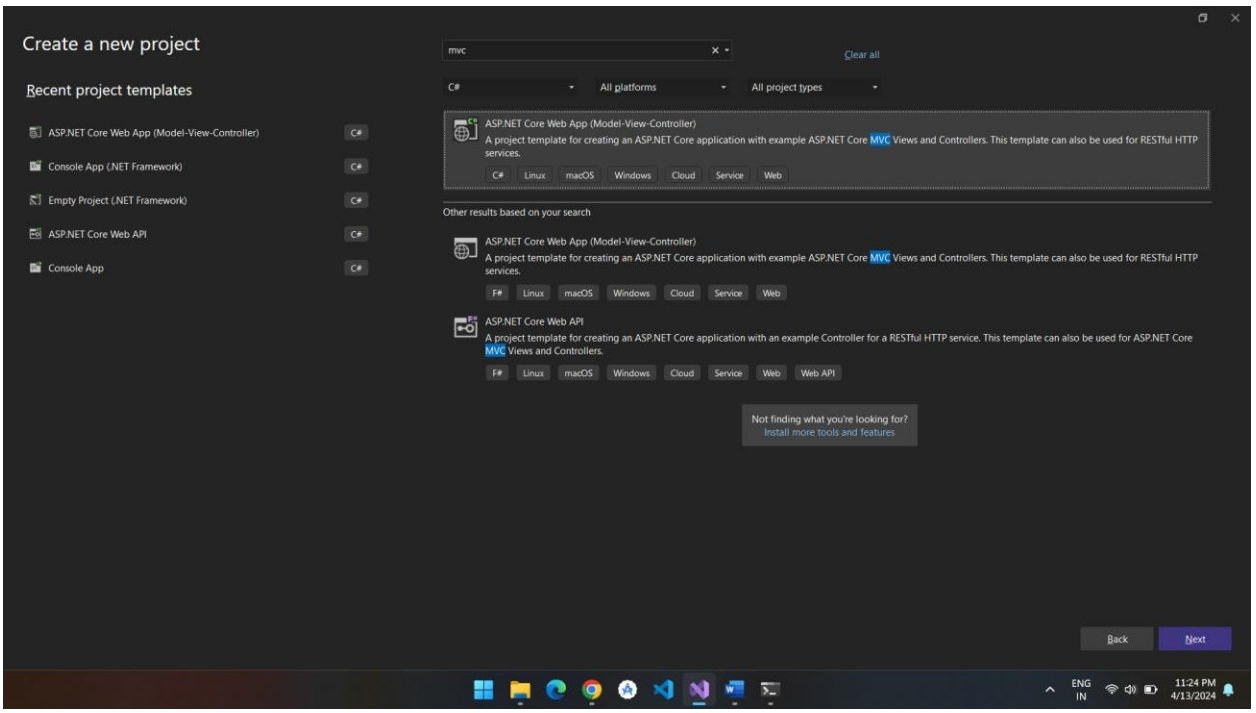
OUTPUT:



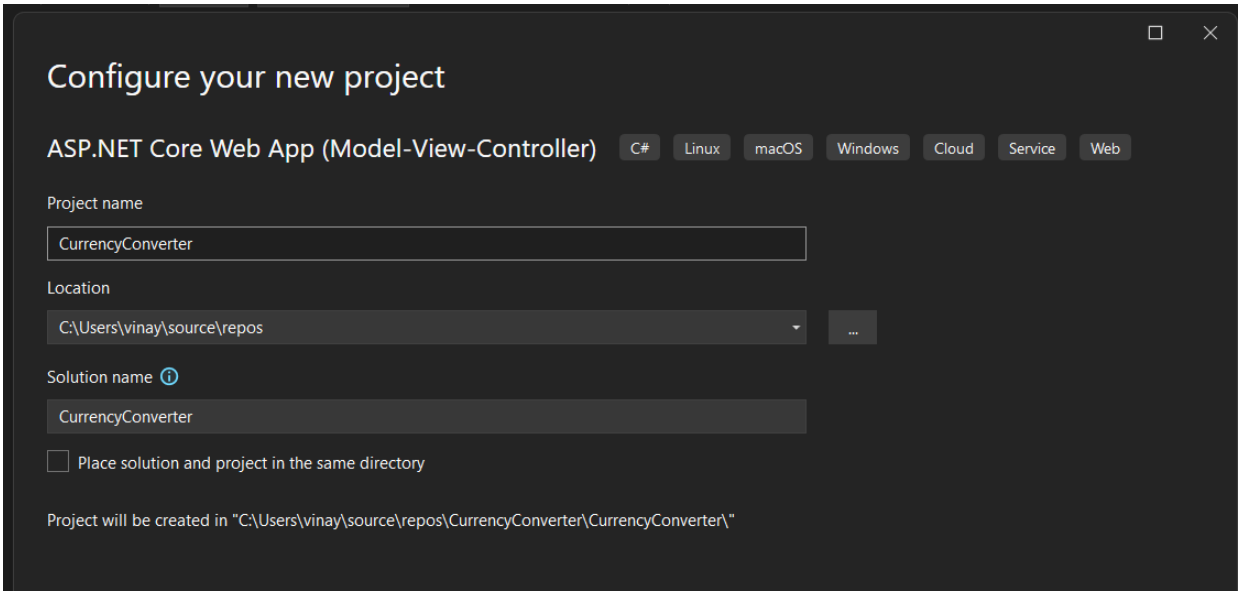


B] Convert Rupees into Dollar and Dollar into Rupees using .NET Framework.

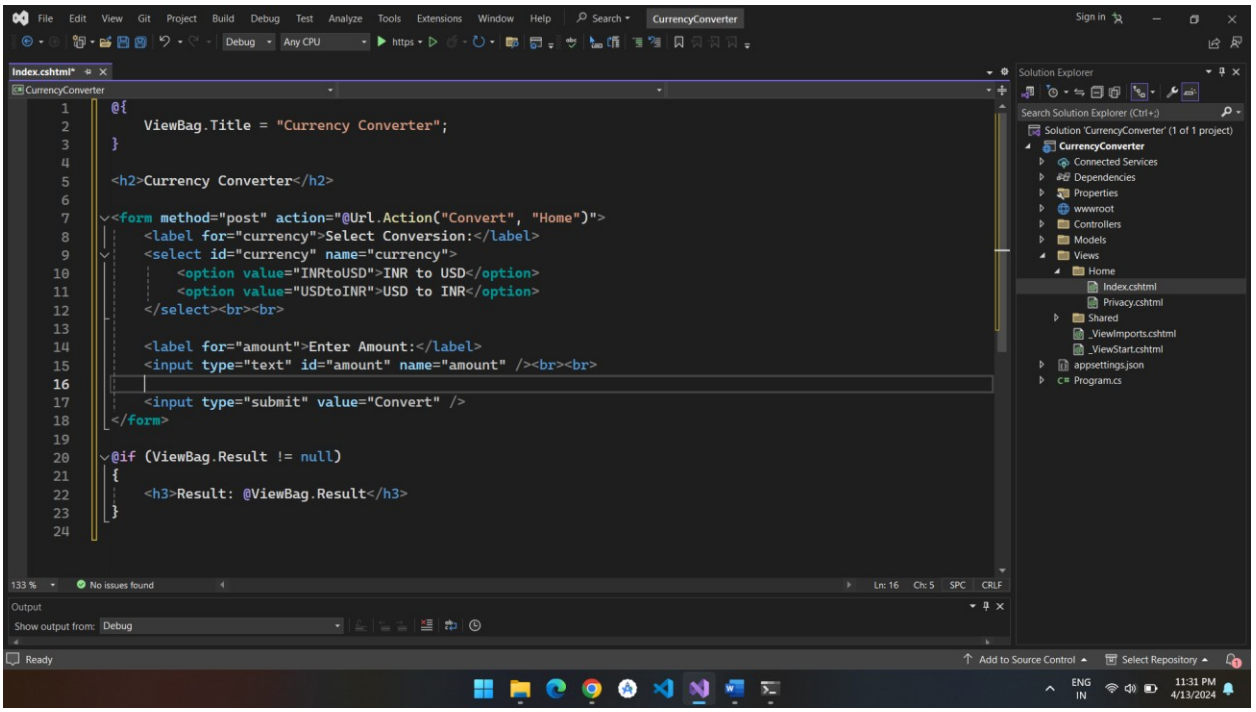
1. create new project→search MVC and select it.



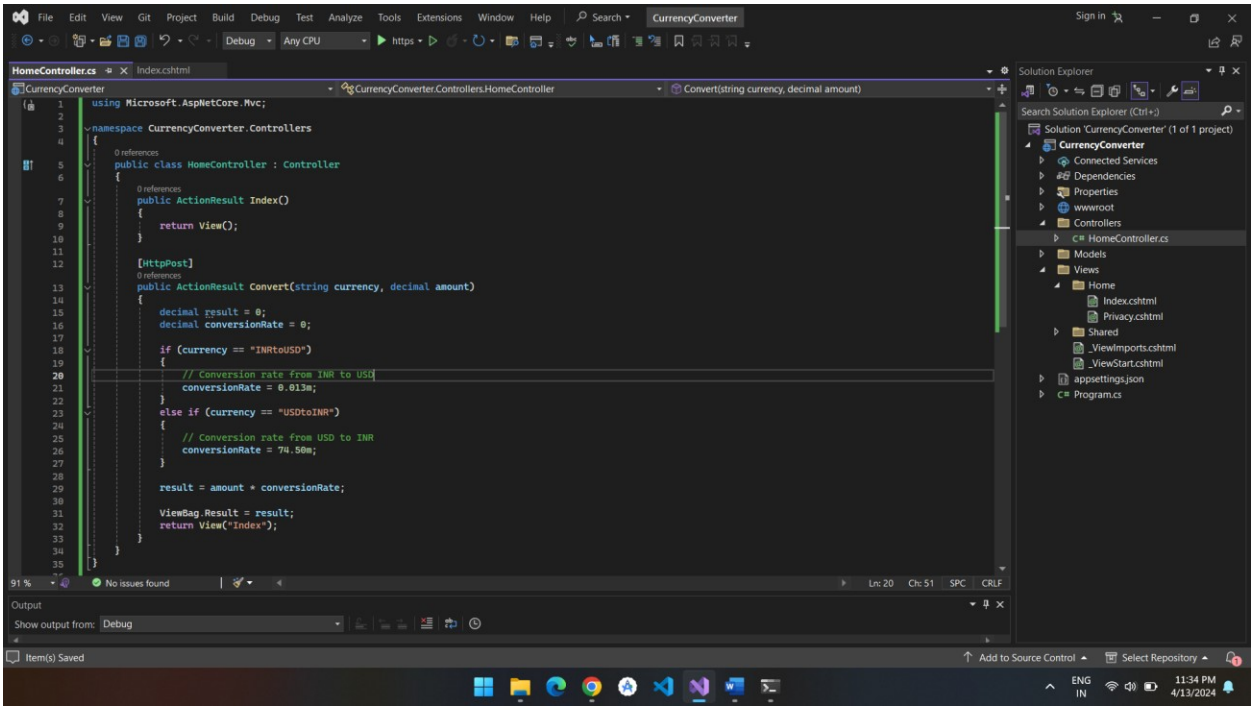
2. Give the project Name→Next→create



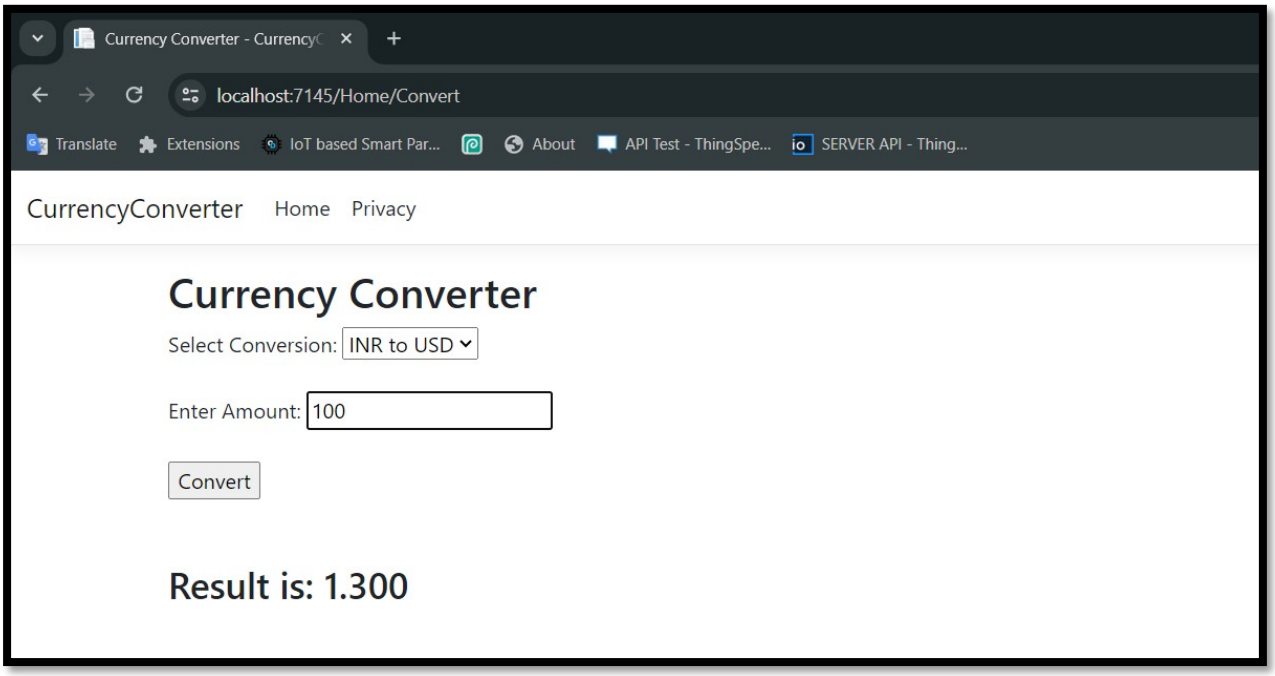
3. After successful creation of project→open solution explorer
4. Views→Home→Index.cshtml and write the following code

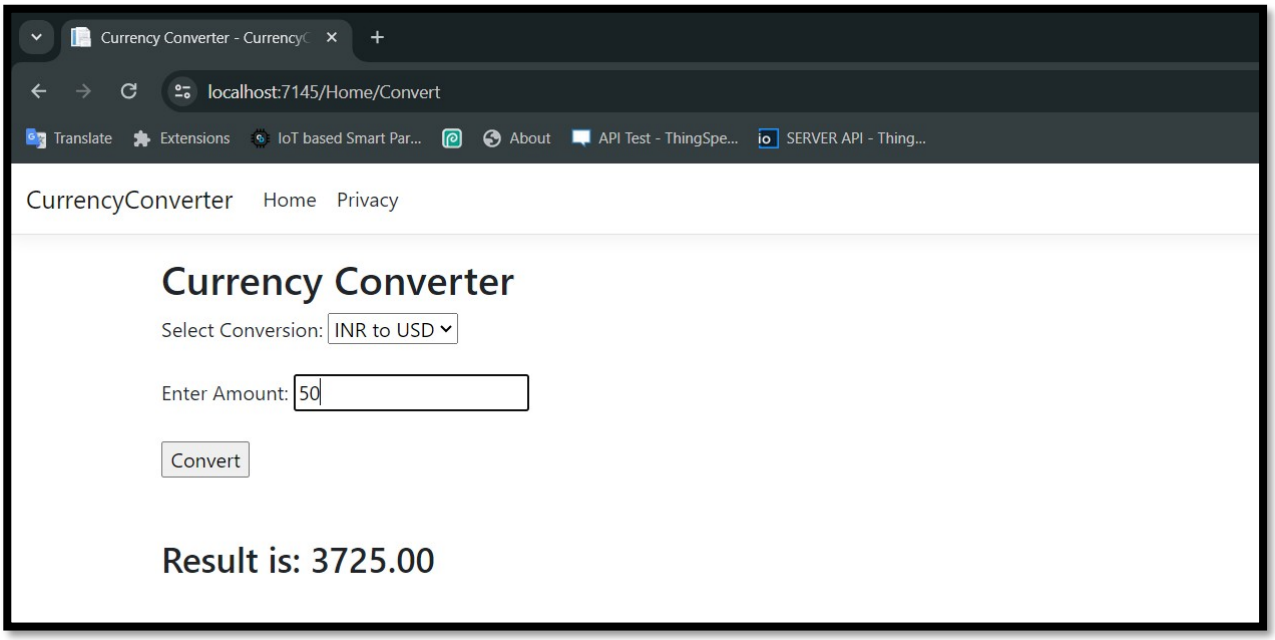


5. After that open Controller→HomeController.cs



OUTPUT:

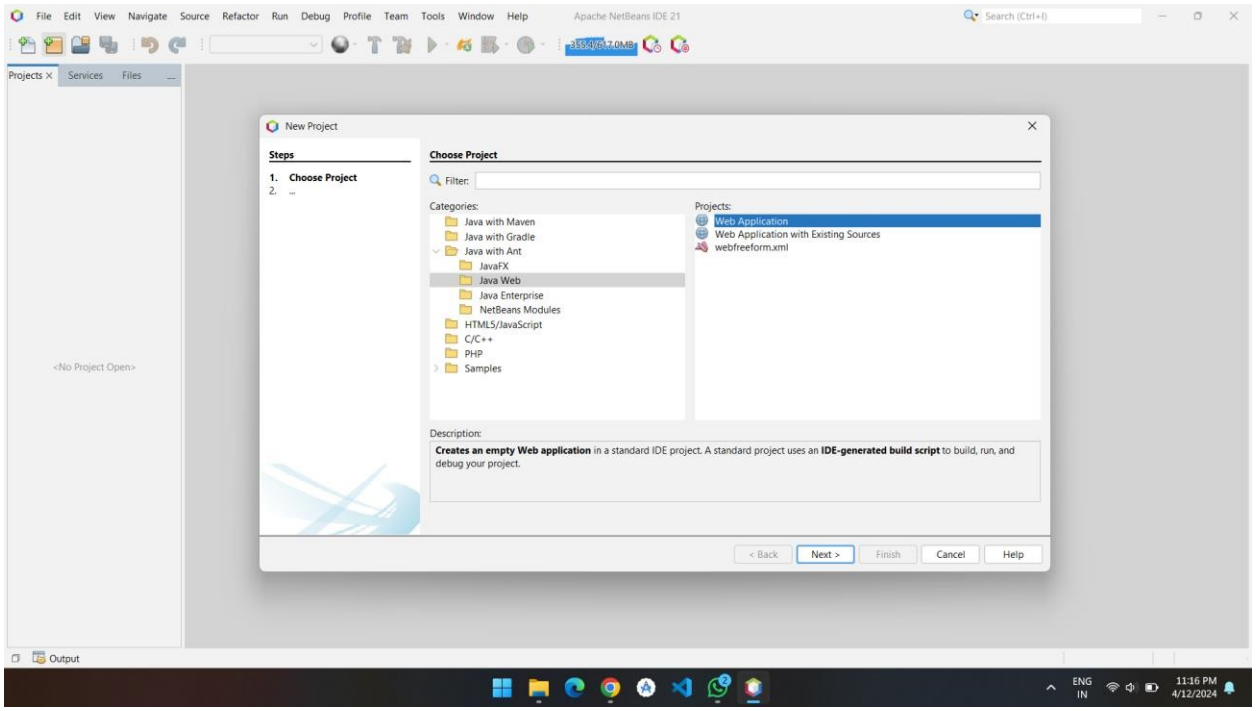

Currency Converter - Currency
localhost:7145/Home/Convert
Translate
Extensions
IoT based Smart Par...
About
API Test - ThingSpe...
SERVER API - Thing...
CurrencyConverter
Home
Privacy
Currency Converter
Select Conversion: INR to USD
Enter Amount: 100
Convert
Result is: 1.300


Currency Converter - Currency
localhost:7145/Home/Convert
Translate
Extensions
IoT based Smart Par...
About
API Test - ThingSpe...
SERVER API - Thing...
CurrencyConverter
Home
Privacy
Currency Converter
Select Conversion: INR to USD
Enter Amount: 50
Convert
Result is: 3725.00

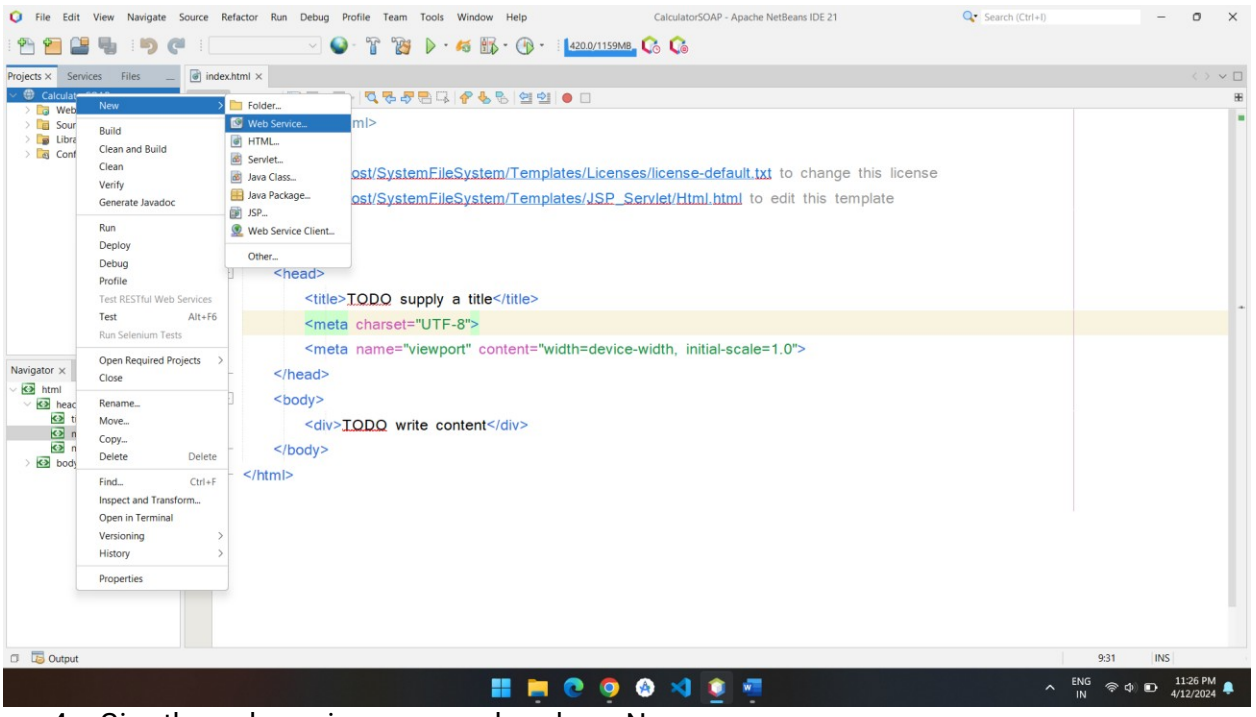
PRACTICAL NO – 2

Aim – Create a simple SOAP Service.

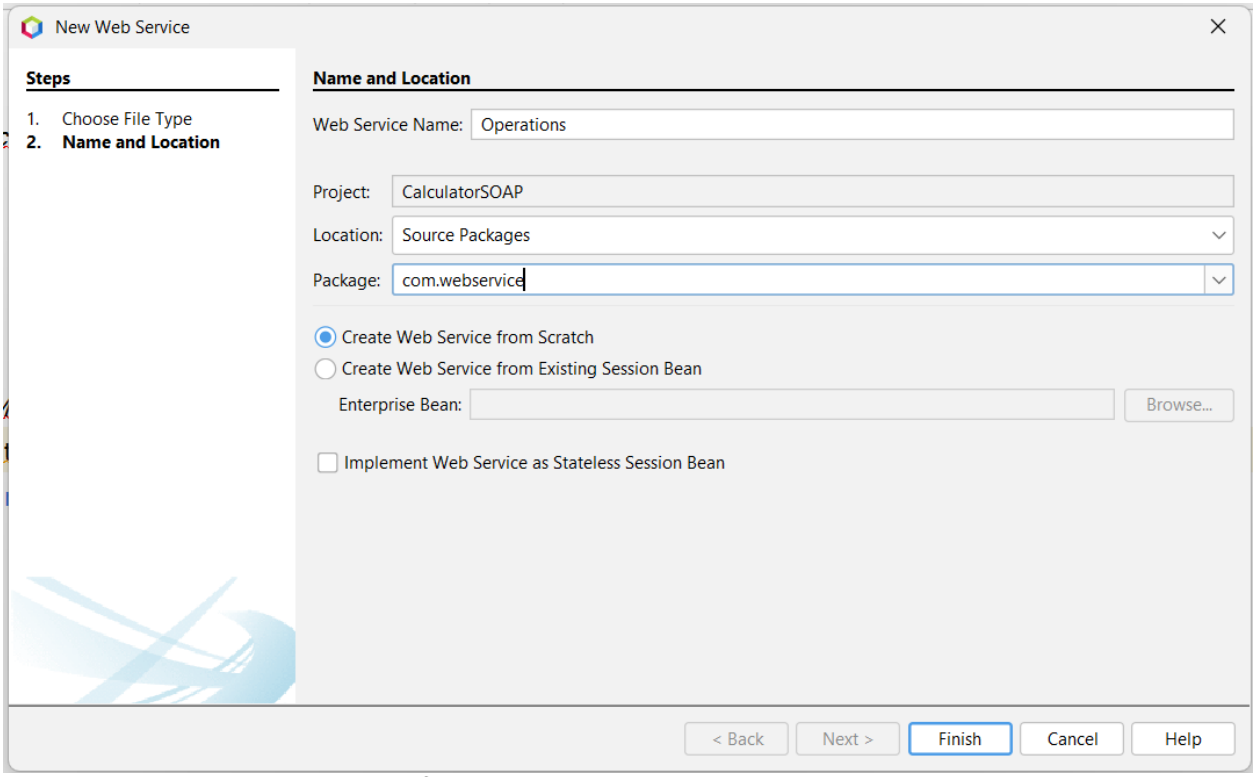
1. Create the new project in netbence software
2. File→New Project→Java web→web Application→Next



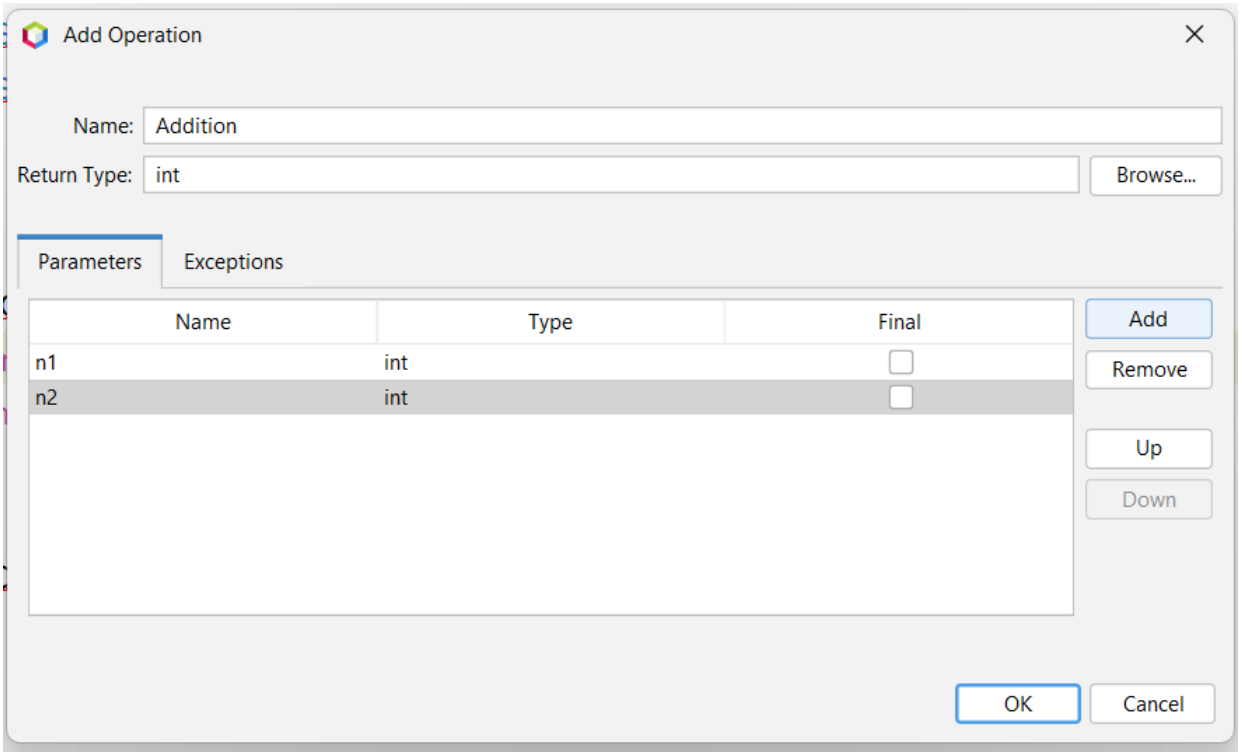
3. Now right click on your project and Add→New→Web Service.



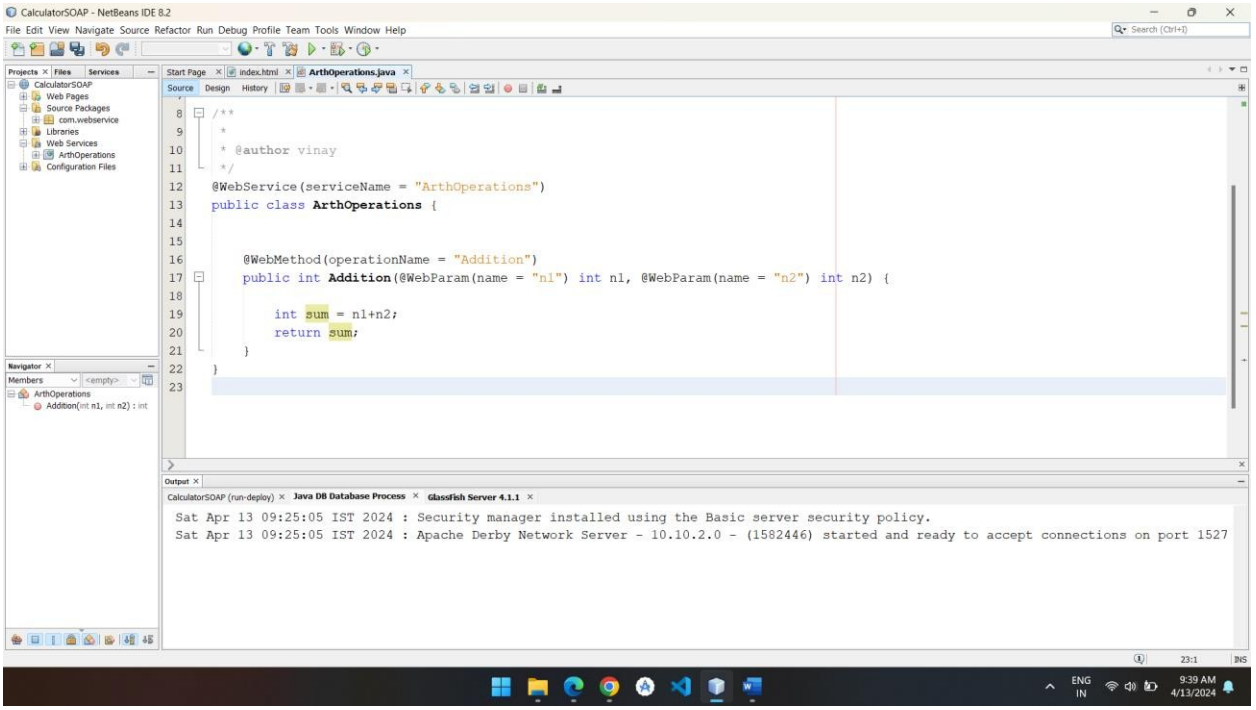
4. Give the web service name and package Name.



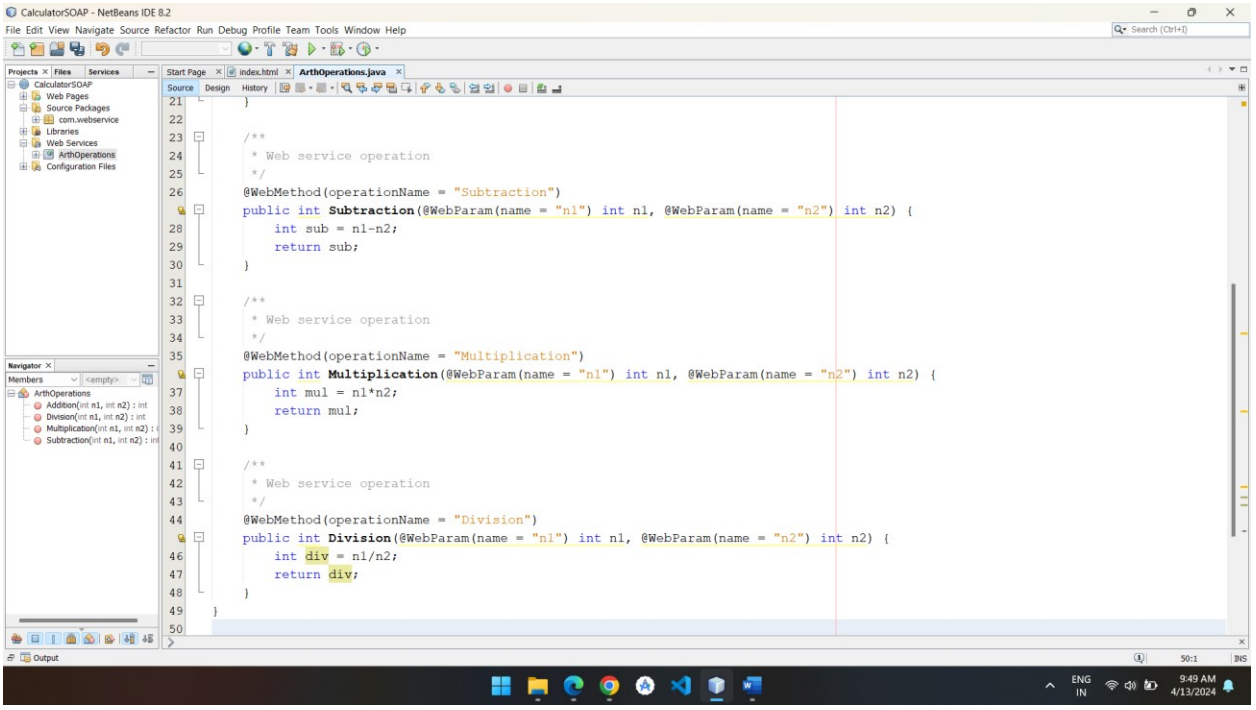
5. Now open Web services folder→ Right click on your web webservice→Add operation
6. After that give operation name→give return type→click on add button→give the name of twonumbers→ok.



7. Now you can the method of Addition will generate automatically. You have to edit it according yourfunction.

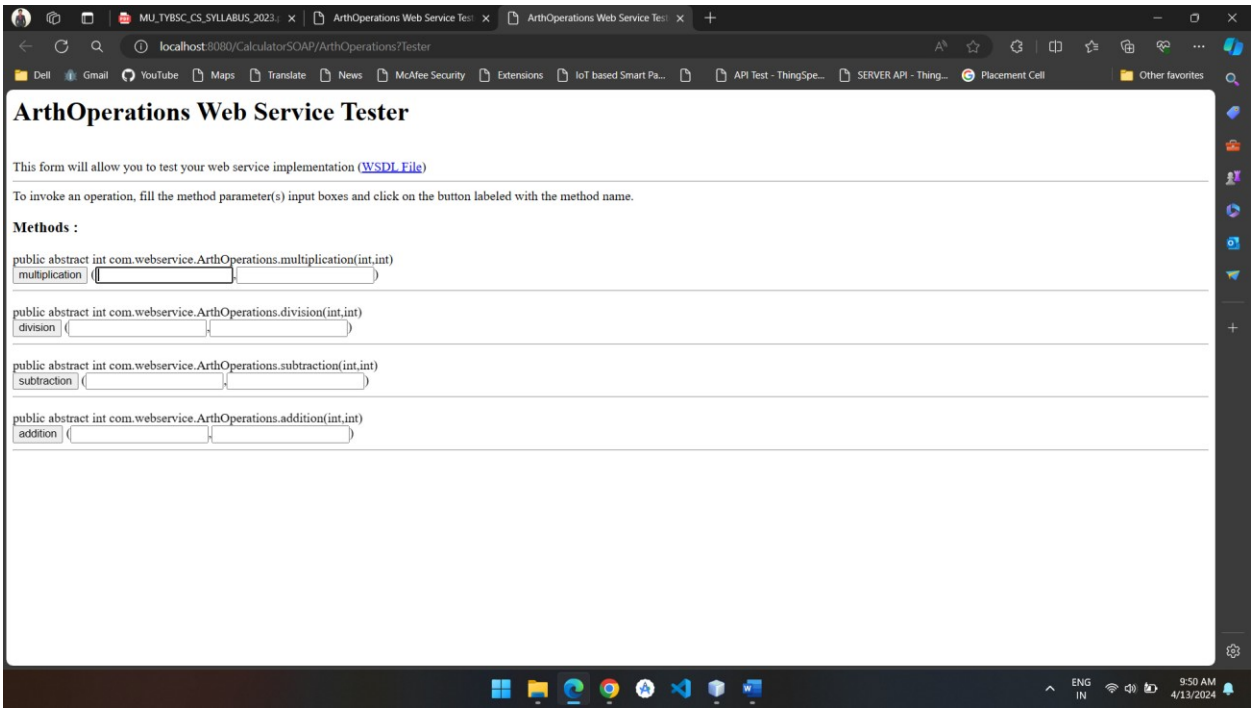


8. Now follow the same steps to create the methods for Subtraction, Multiplication and Division.

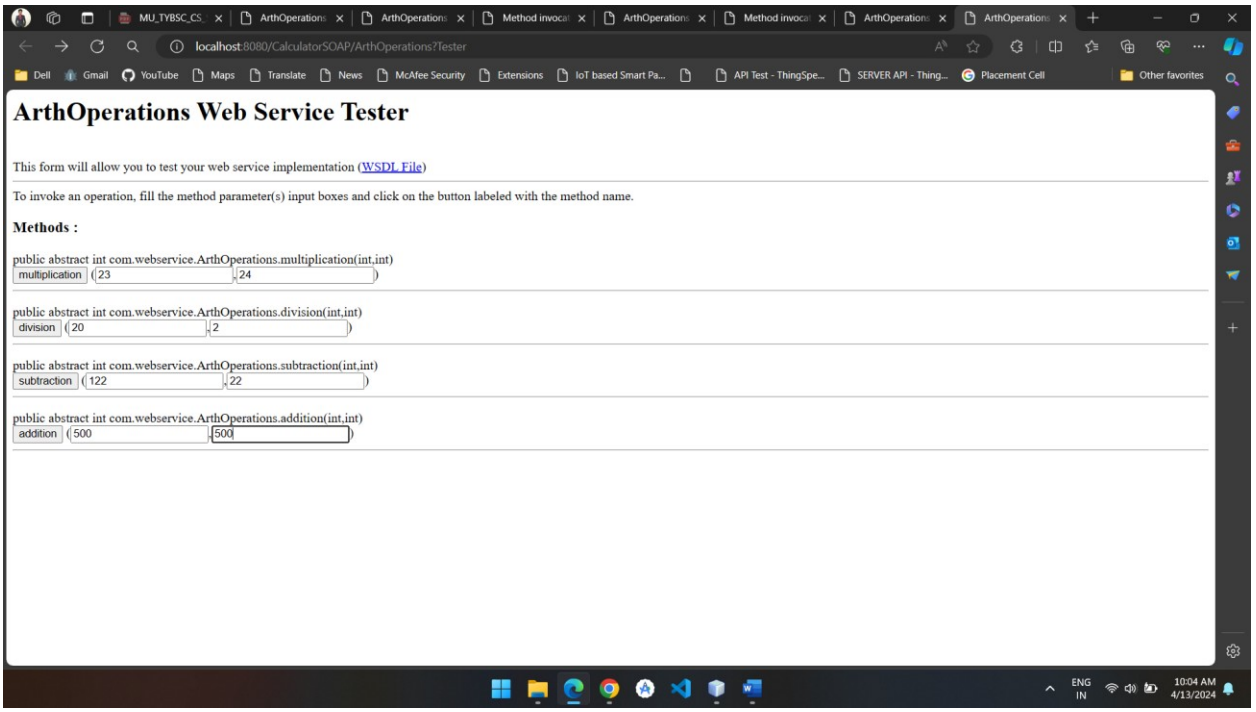


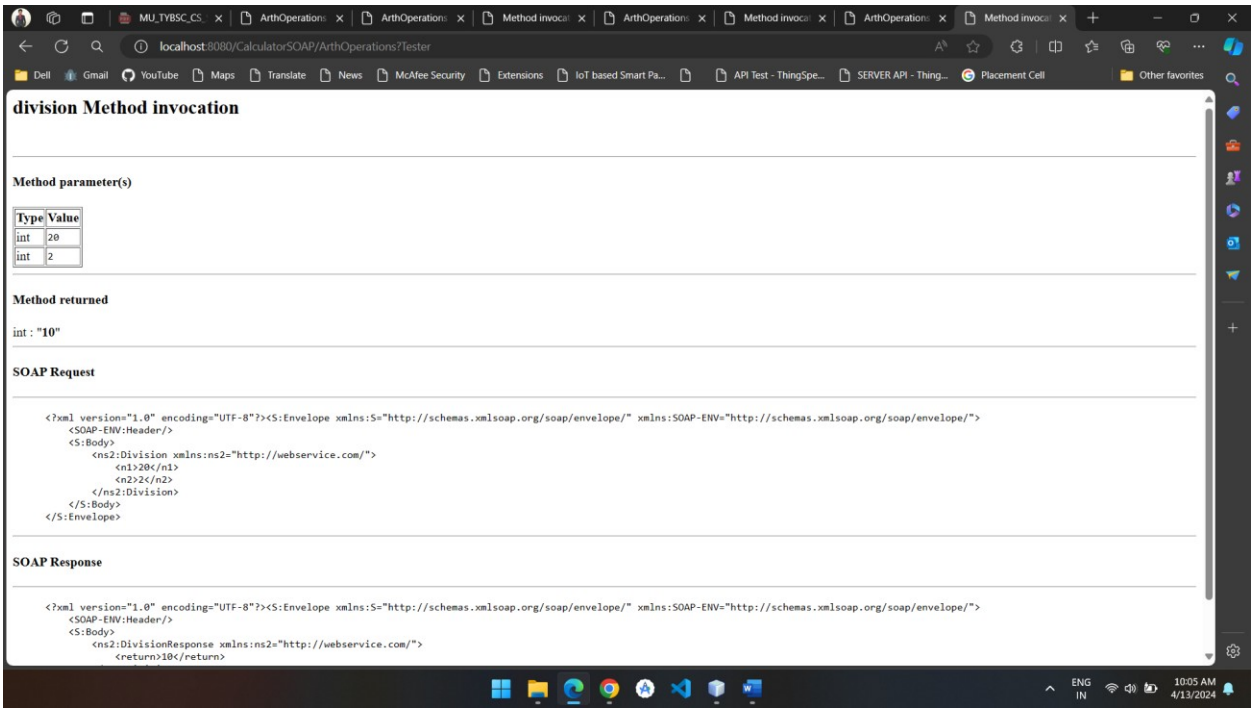
9. Right click on project→Deploy
10. Write click on webservice→Test Web Service

OUTPUT:



11. Now we can perform any Addition, Subtraction, Multiplication and Division.

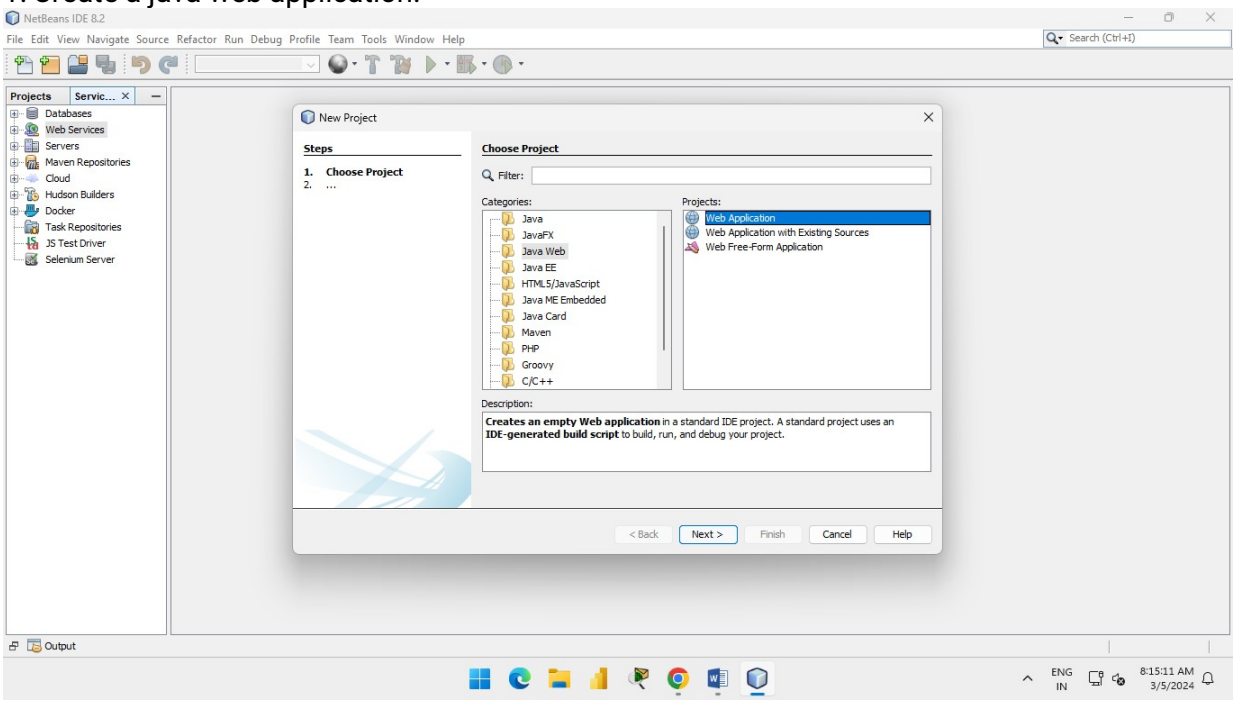


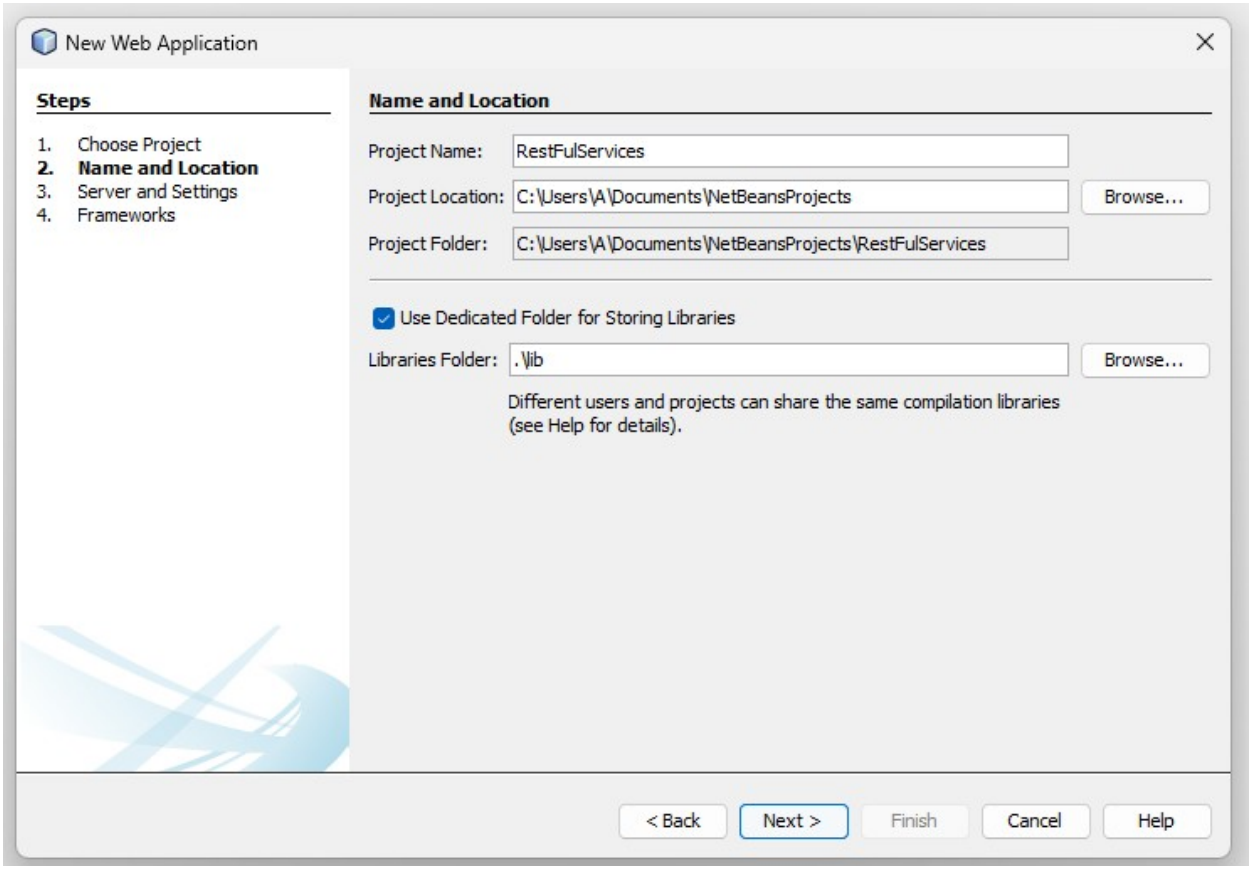

MU_TYBSC_CS
ArthOperations
Method invocat
localhost:8080/CalculatorSOAP/ArthOperations?Tester
Dell
Gmail
YouTube
Maps
Translate
News
McAfee Security
Extensions
IoT based Smart Pa...
API Test - ThingSpe...
SERVER API - Thing...
Placement Cell
Other favorites
division Method invocation
Method parameter(s)
Type
Value
int
20
int
2
Method returned
int : "10"
SOAP Request
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Header/>
<S:Body>
<ns2:Division xmlns:ns2="http://webservice.com/">
<n1>20</n1>
<n2>2</n2>
</ns2:Division>
</S:Body>
</S:Envelope>
SOAP Response
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Header/>
<S:Body>
<ns2:DivisionResponse xmlns:ns2="http://webservice.com/">
<return>10</return>
ENG
IN
10:05 AM
4/13/2024

PRACTICAL NO – 3

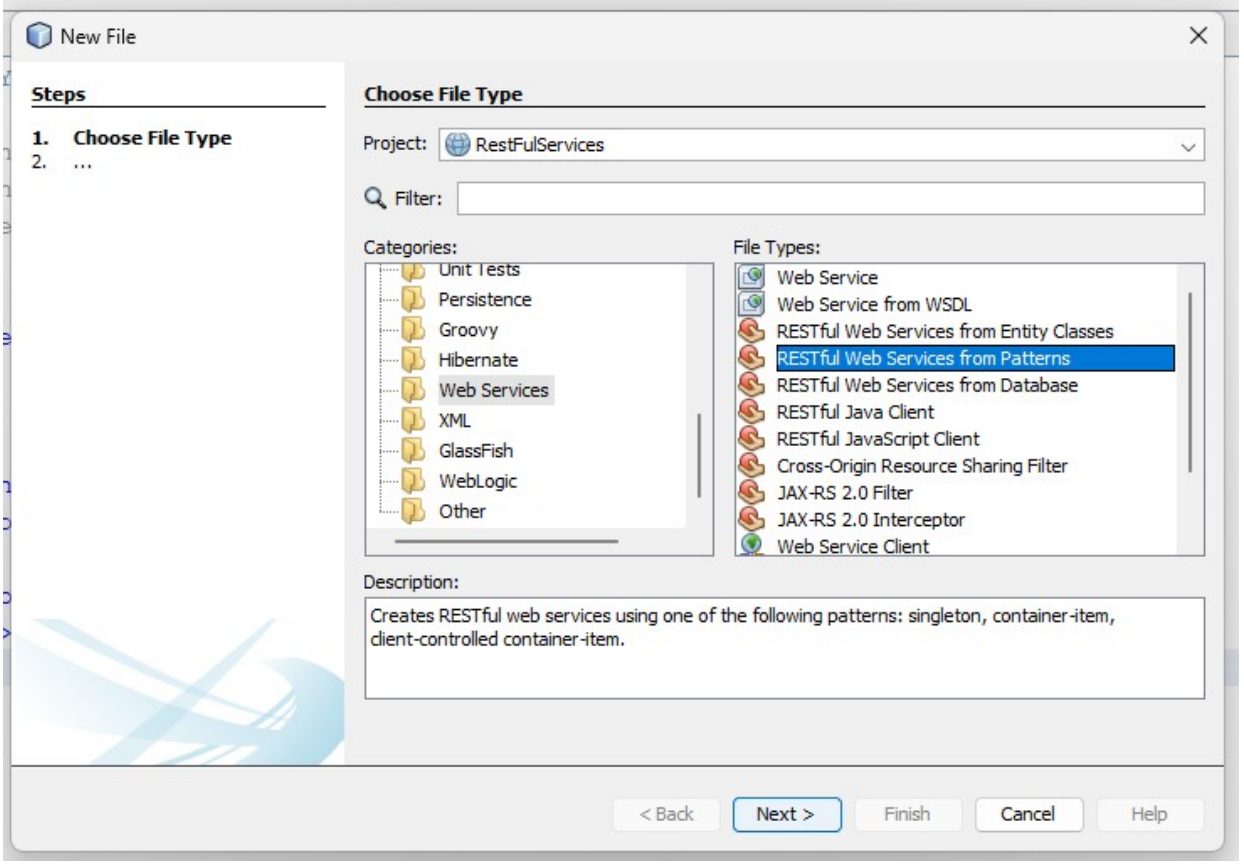
Aim – Create simple REST service.

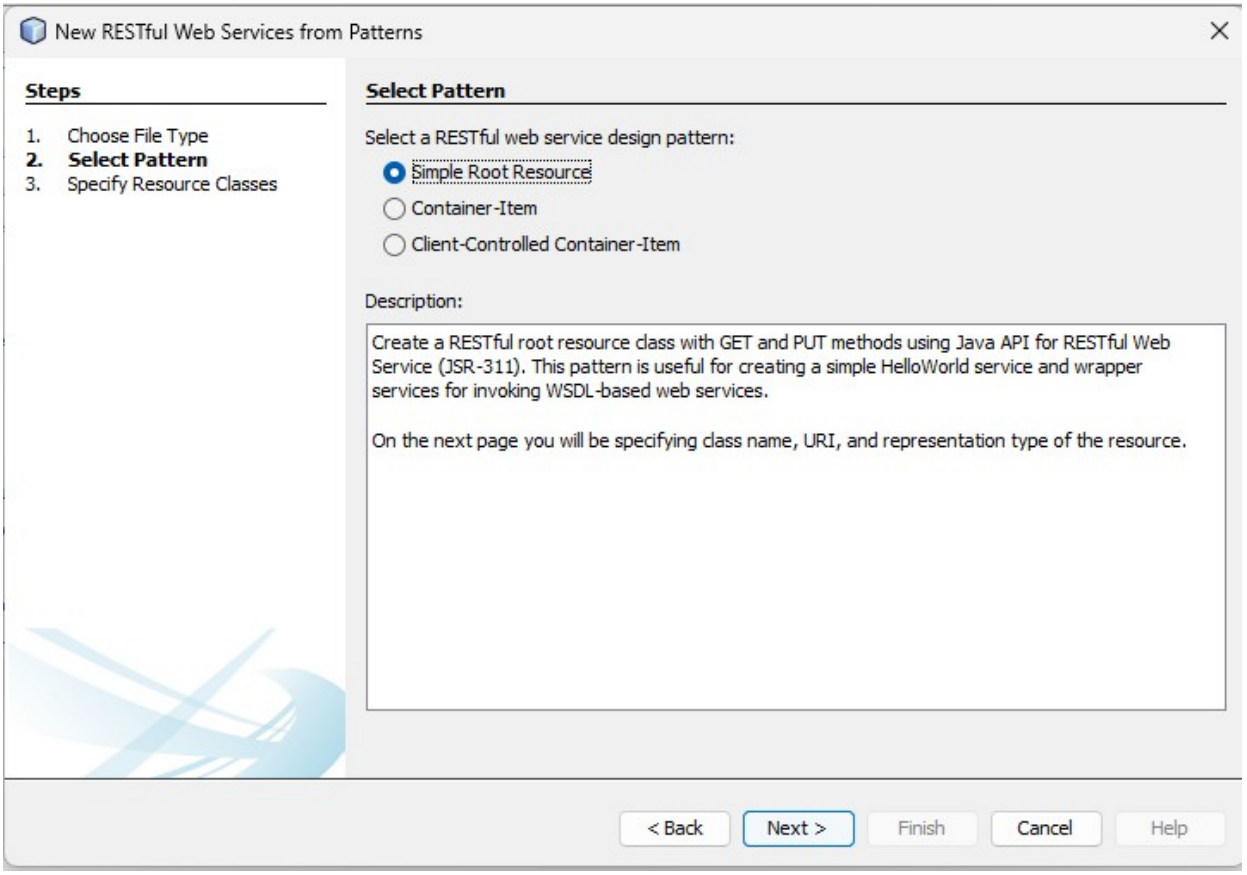
1. Create a java web application.



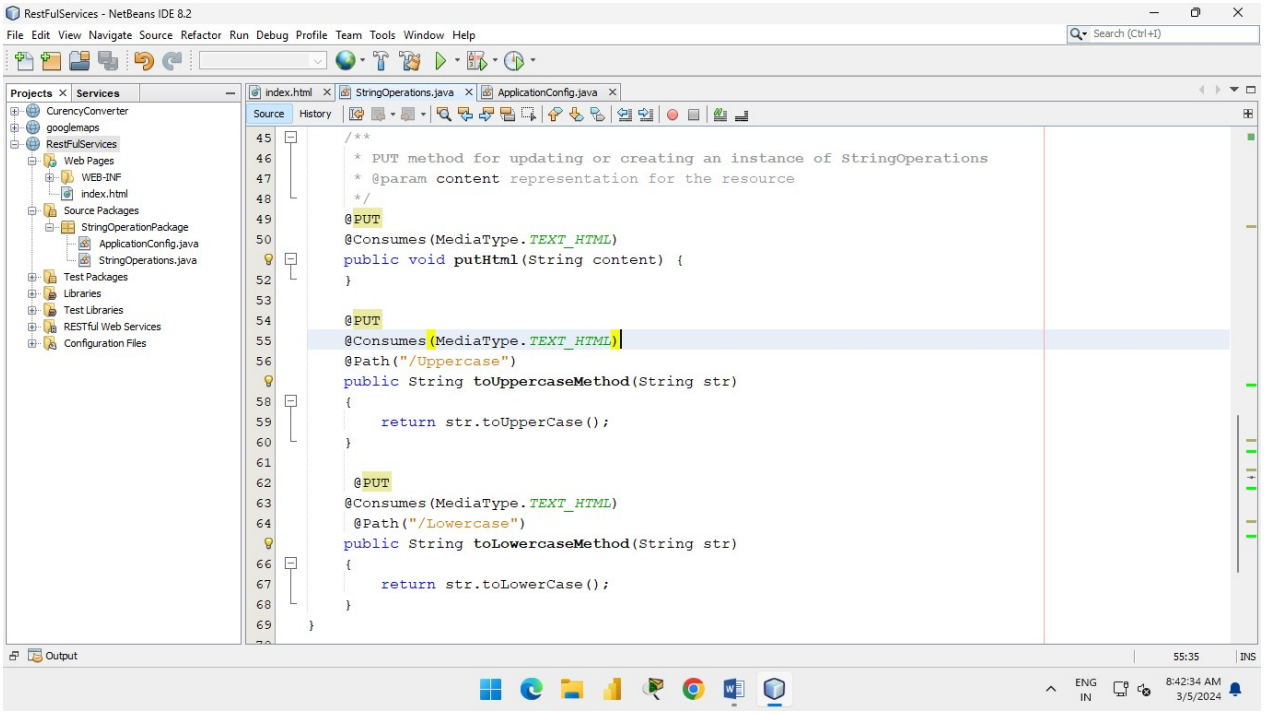


2. Right click on project→new→others→web services →RESTful web services from patterns.

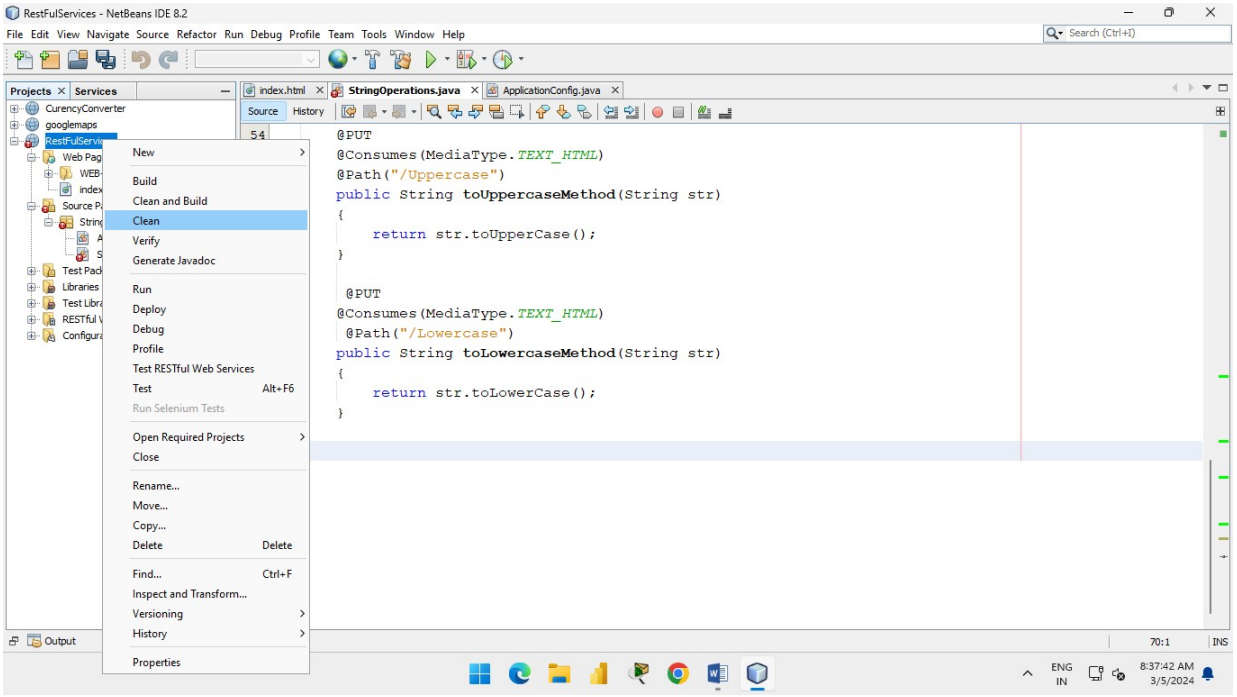




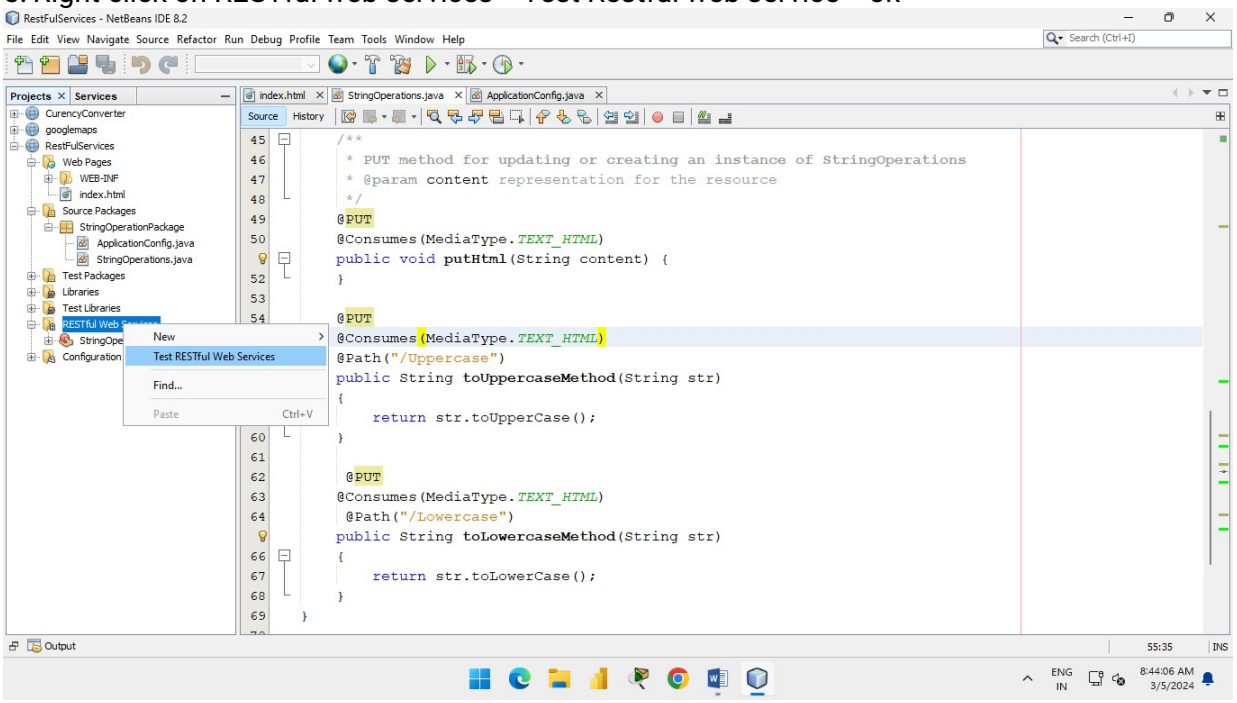
3. Change the code and create methods as following…

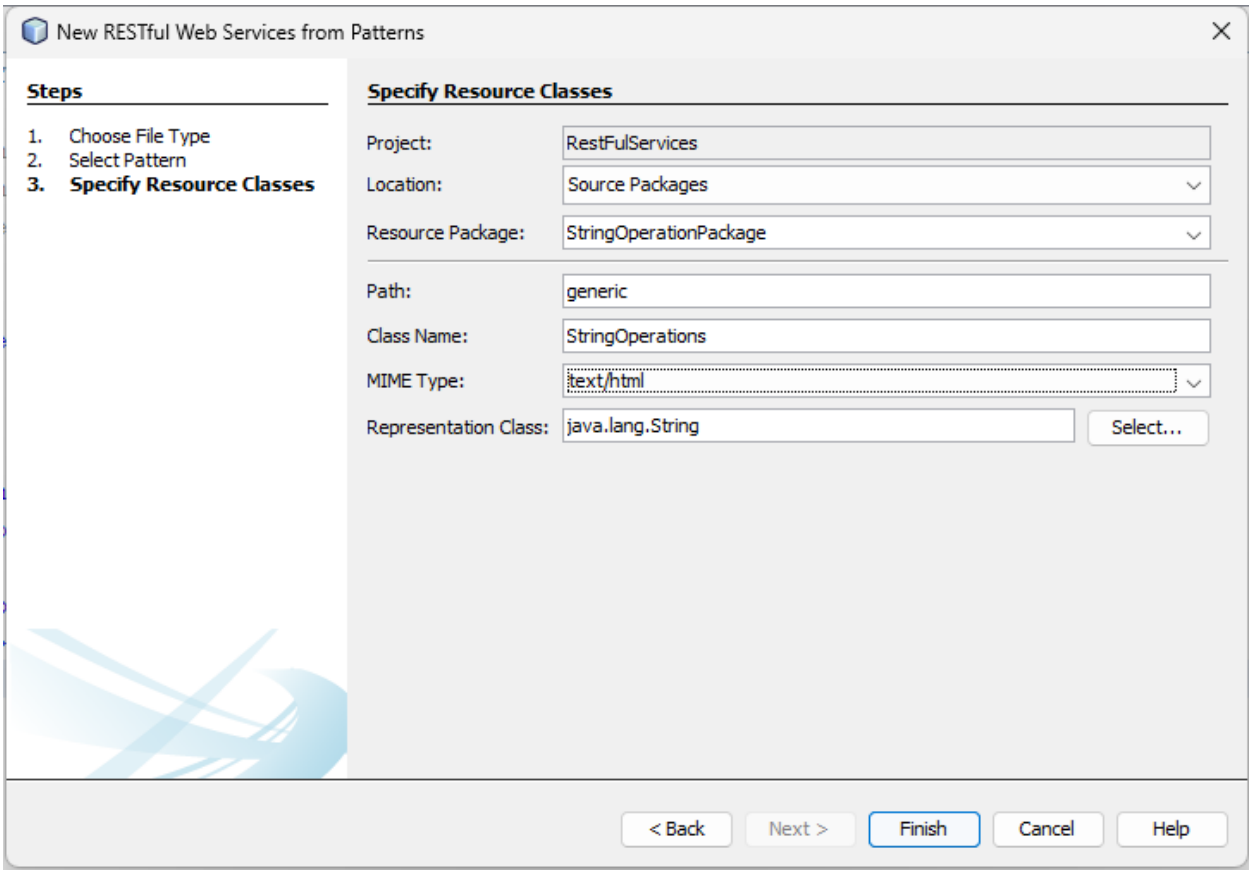


4. Right click on project and clean the project and after deploy it.

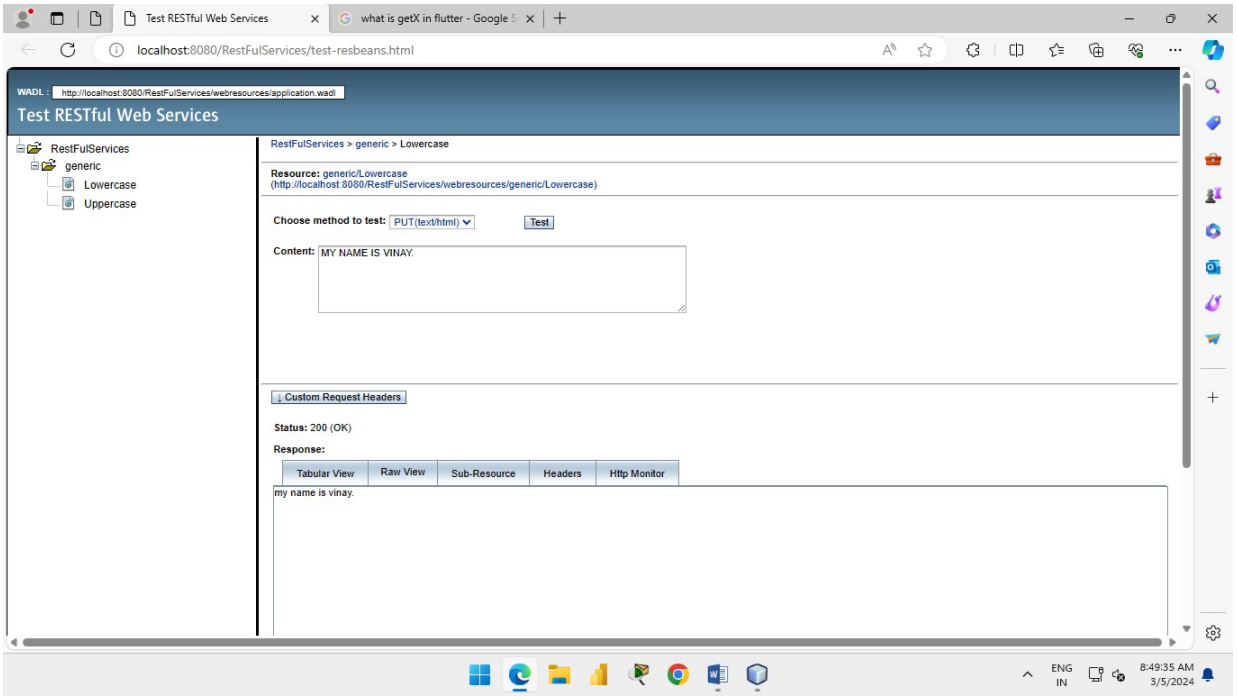


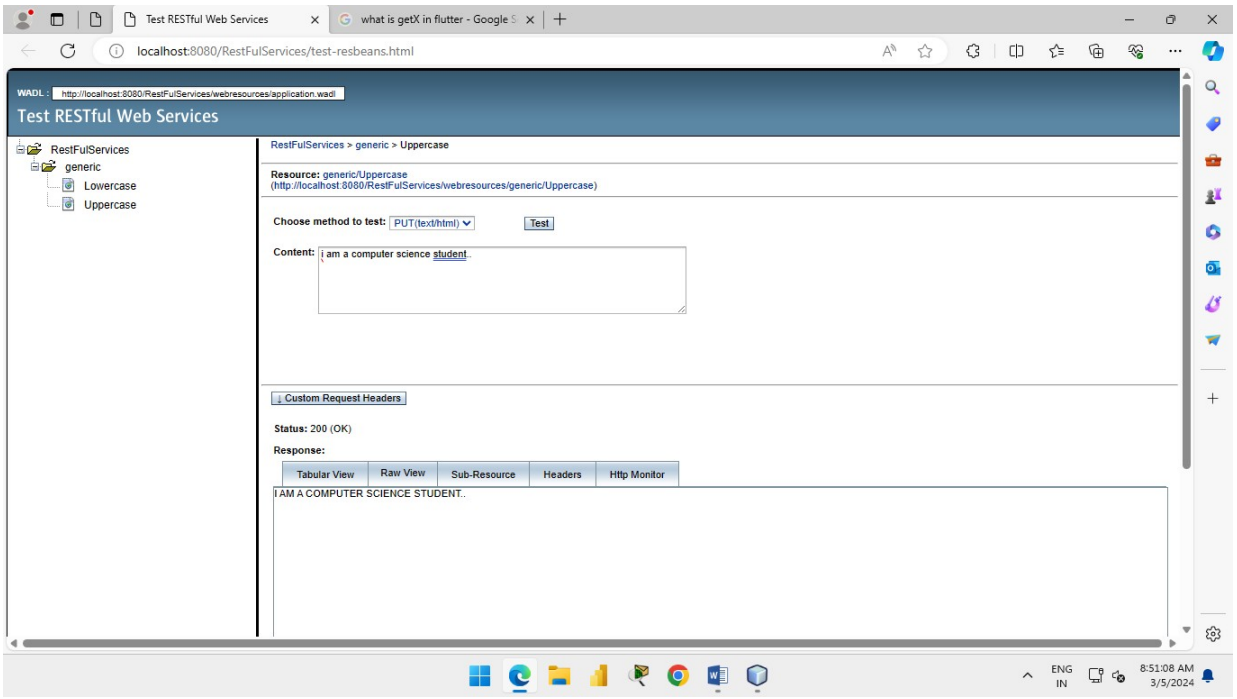
5. Right click on RESTful web services→Test Restful web service→ok




New RESTful Web Services from Patterns
Steps
1. Choose File Type
2. Select Pattern
3. Specify Resource Classes
Specify Resource Classes
Project:
RestFulServices
Location:
Source Packages
Resource Package:
StringOperationPackage
Path:
generic
Class Name:
StringOperations
MIME Type:
text/html
Representation Class:
java.lang.String
Select...
< Back
Next >
Finish
Cancel
Help

OUTPUT:


Test RESTful Web Services
what is getX in flutter - Google S
localhost:8080/RestFulServices/test-resbeans.html
WADL : http://localhost:8080/RestFulServices/webresources/application.wadl
Test RESTful Web Services
RestFulServices
generic
Lowercase
Uppercase
RestFulServices > generic > Lowercase
Resource: generic/Lowercase
(http://localhost:8080/RestFulServices/webresources/generic/Lowercase)
Choose method to test: PUT(text/html)
Test
Content: MY NAME IS VINAY.
Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
my name is vinay.
ENG
IN
8:49:35 AM
3/5/2024

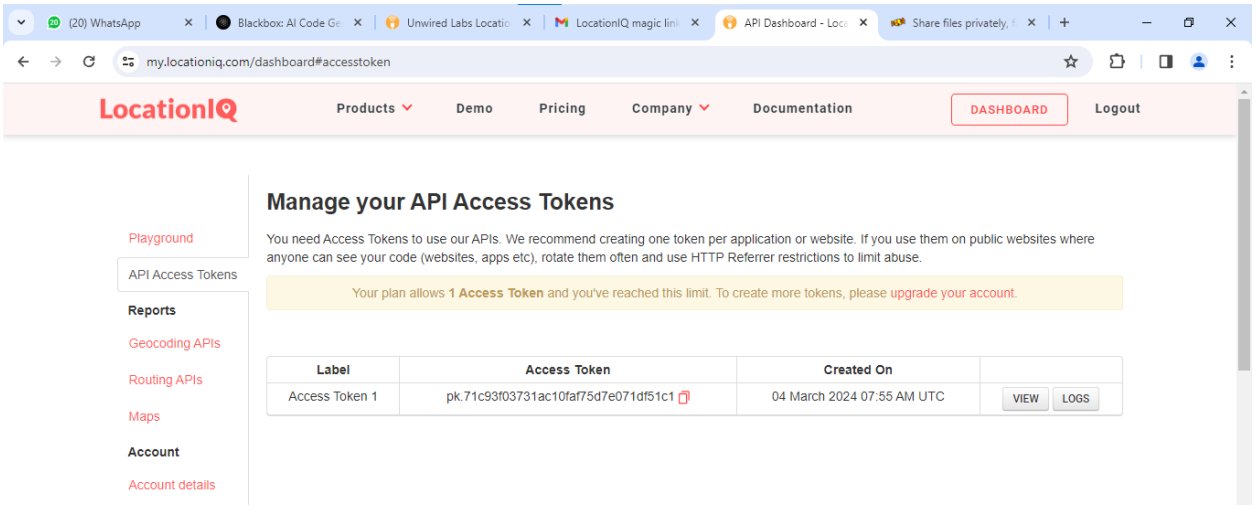

Test RESTful Web Services
what is getX in flutter - Google S
localhost:8080/RestFulServices/test-resbeans.html
WADL : http://localhost:8080/RestFulServices/webresources/application.wadl
Test RESTful Web Services
RestFulServices
generic
Lowercase
Uppercase
RestFulServices > generic > Uppercase
Resource: generic/Uppercase
(http://localhost:8080/RestFulServices/webresources/generic/Uppercase)
Choose method to test: PUT(text/html)
Test
Content: i am a computer science student.
Custom Request Headers
Status: 200 (OK)
Response:
Tabular View
Raw View
Sub-Resource
Headers
Http Monitor
I AM A COMPUTER SCIENCE STUDENT..
ENG
IN
8:51:08 AM
3/5/2024

PRACTICAL NO – 4

Aim – Develop application to consume Google's search / Google map RESTful Web service.

```
import requests

def get_geolocation(api_key, search_string):
    base_url = "https://us1.locationiq.com/v1/search"
    params = {
        'key': api_key,
        'q': search_string,
        'format': 'json',
    }

    response = requests.get(base_url, params=params)
    data = response.json()

    if response.status_code == 200 and data:
        result = {
            'place_id': data[0].get('place_id', ''),
            'lat': data[0].get('lat', ''),
            'lon': data[0].get('lon', ''),
            'display_name': data[0].get('display_name', ''),
        }
        return result
    else:
        print(f"Error: {response.status_code} - {data.get('error', 'No error message')}")
        return None

api_key = 'pk.71c93f03731ac10faf75d7e071df51c1 '
search_string = input("Enter the location : ")

result = get_geolocation(api_key, search_string)

if result:
    print("Output:")
    for key, value in result.items():
        print(f"{key}: {value}")
```

BROWSE LOCATION IQ>SIGNUP WITH EMAIL> CLICK ON THE LINK PROVIDED BY LOCATION IQ (on your email)>YOU WILL GET YOUR ACCESS TOKEN COPY THE KEY AND PASTE IN THE PYTHON CODE:



RUN THE CODE

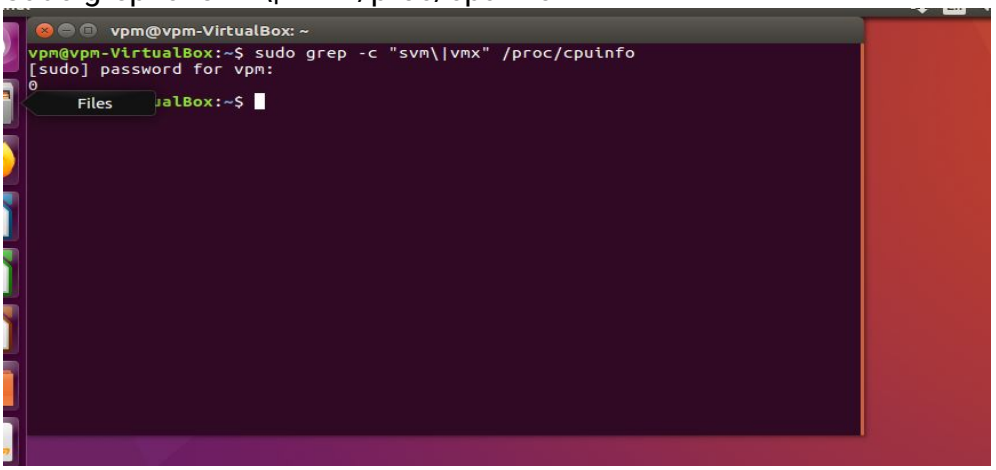
Output:

```
= RESTART: C:\Users\Lab201\Desktop\geolocation.py
Enter the location : mumbai
Output:
place_id: 337978786
lat: 19.08157715
lon: 72.88662753964906
display_name: Mumbai, Maharashtra, India
```

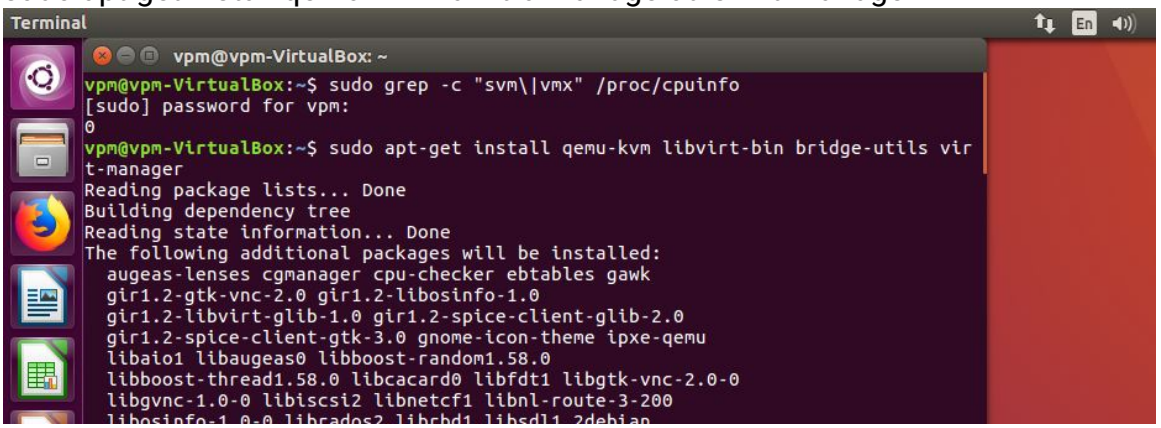
PRACTICAL NO – 5

Aim – Installation and configuration of virtualization using a KVM.

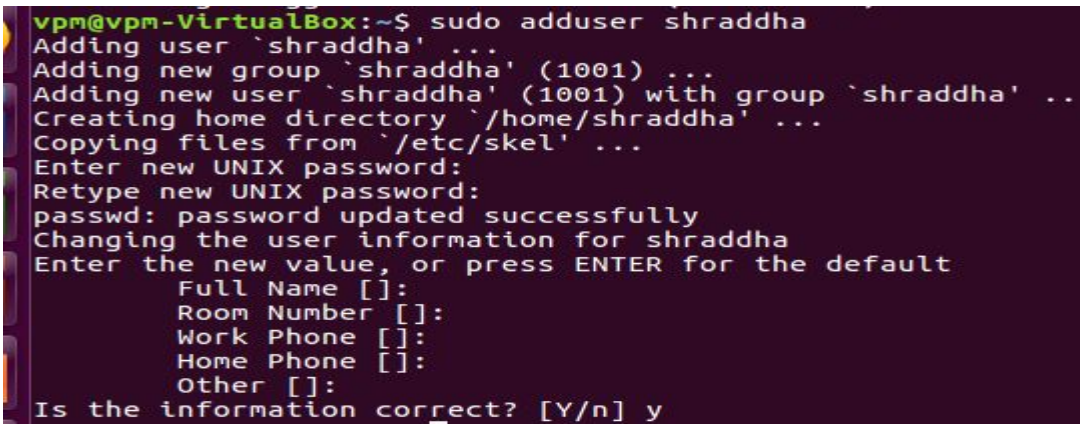
Open Ubuntu in virtual machine.
Now open the terminal and perform the following command
Sudo grep -c "svm\|vmx" /proc/cpuinfo



sudo apt-get install qemu-kvmlibvirt-bin bridge-utils virt-manager



Sudo adduser shraddha



Sudo adduser shraddha libvirtd

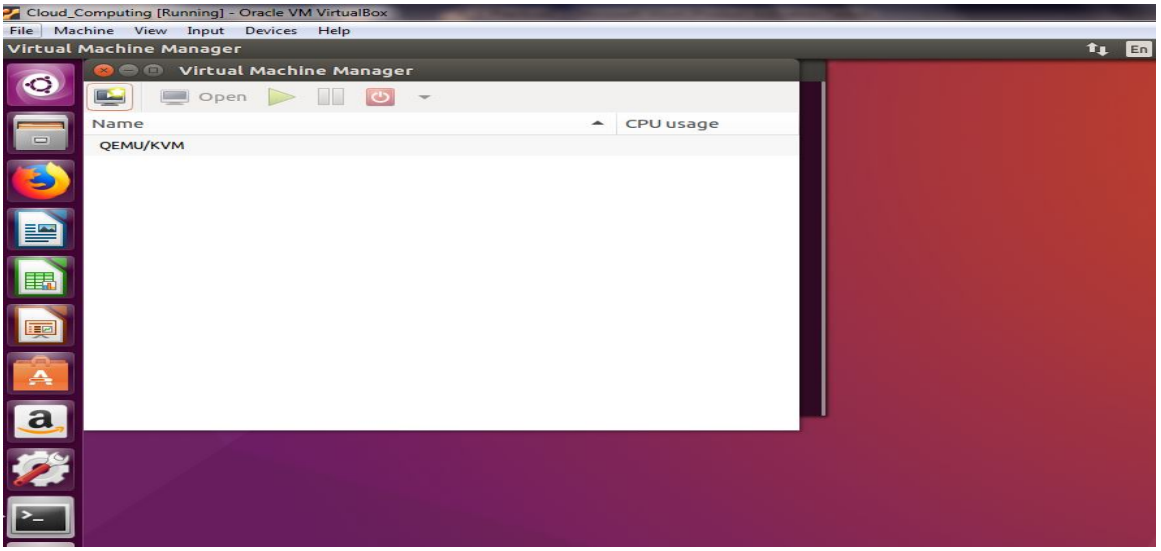
```
vpm@vpm-VirtualBox:~$ sudo adduser shraddha libvirtd
Adding user `shraddha' to group `libvirtd' ...
Adding user shraddha to group libvirtd
Done.
vpm@vpm-VirtualBox:~$
```

virsh -c qemu:///system list

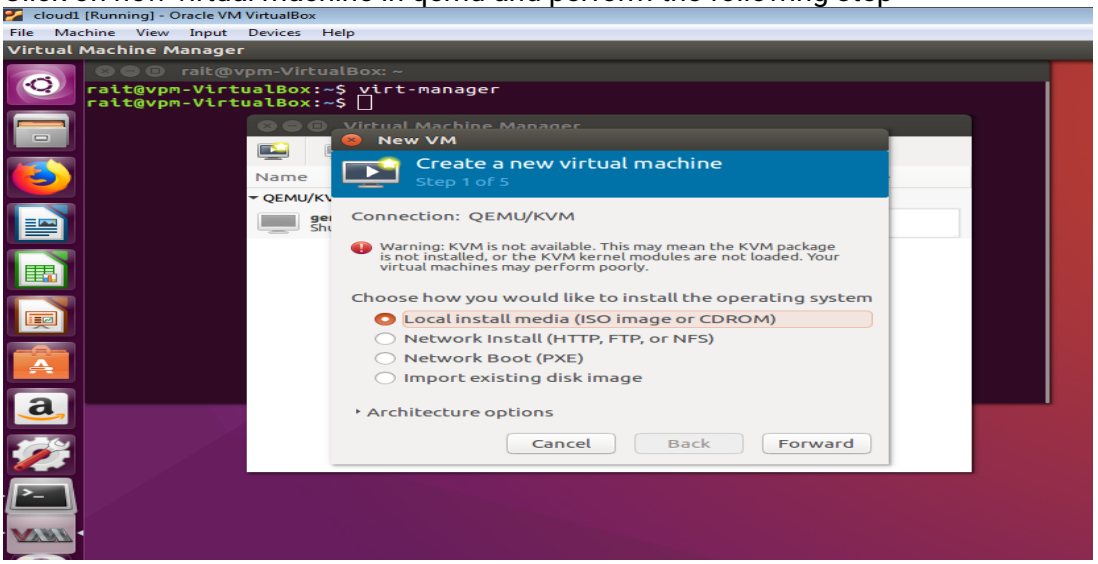
```
shraddha@vpm-VirtualBox:~$ virsh -c qemu:///system list
 Id    Name                           State
----------------------------------------------------

shraddha@vpm-VirtualBox:~$
```

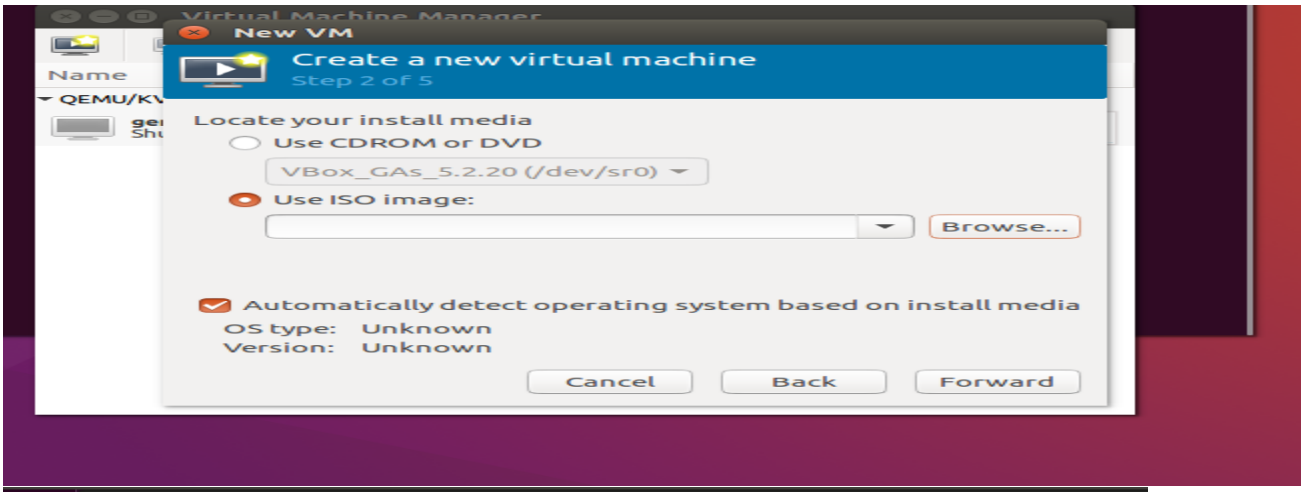
virt-manager

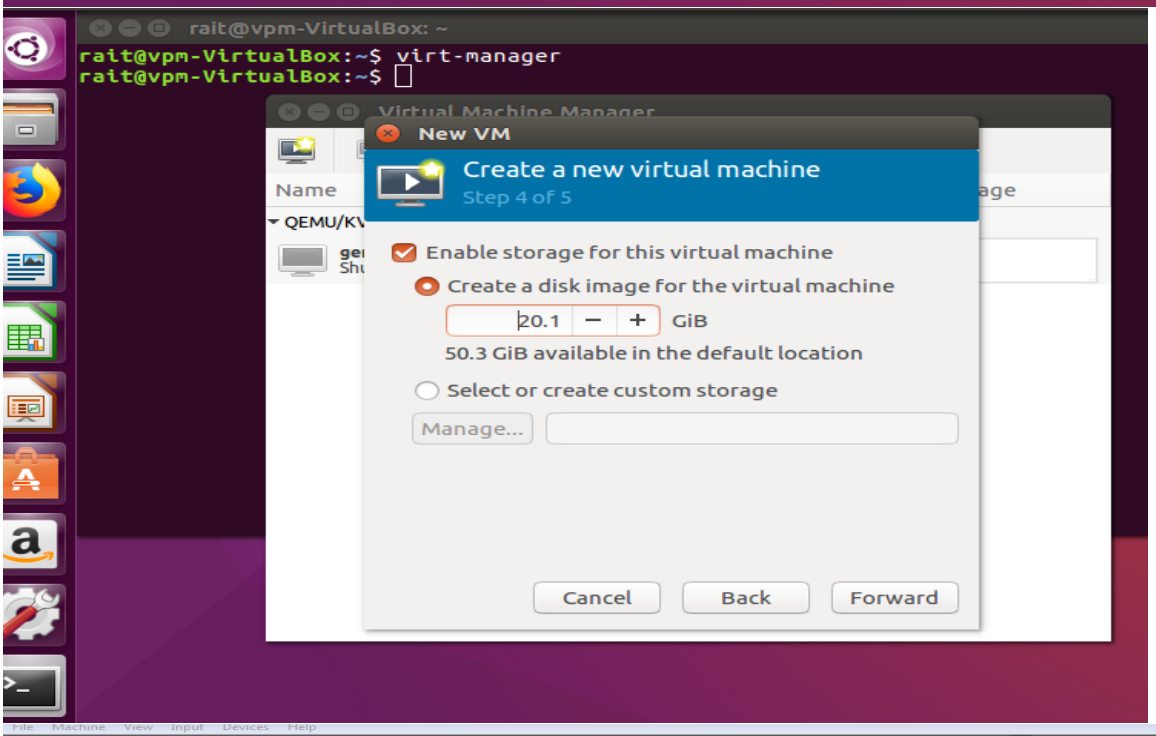
```
shraddha@vpm-VirtualBox:~$ virt-manager
shraddha@vpm-VirtualBox:~$
```

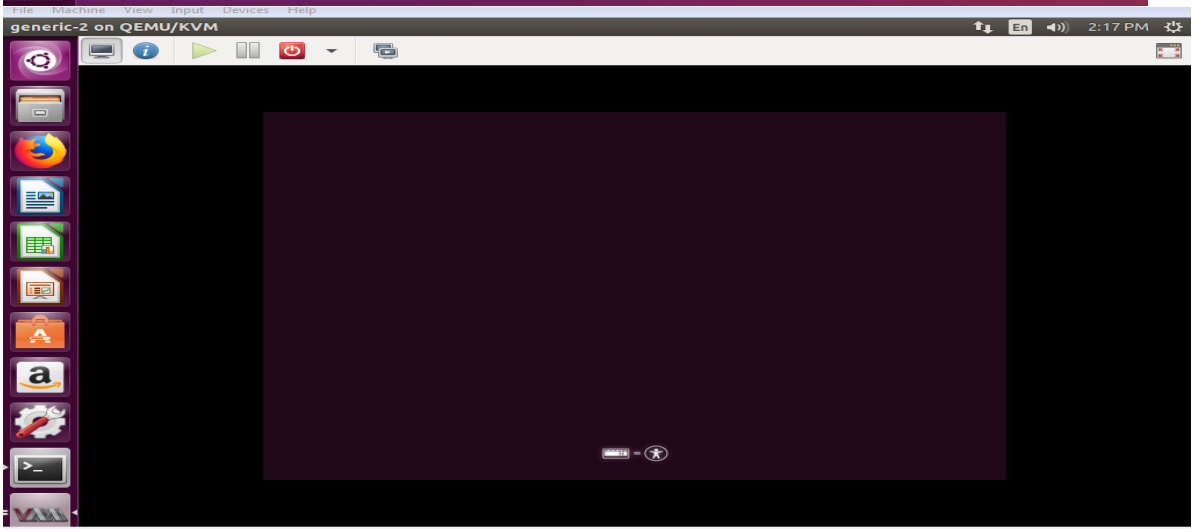


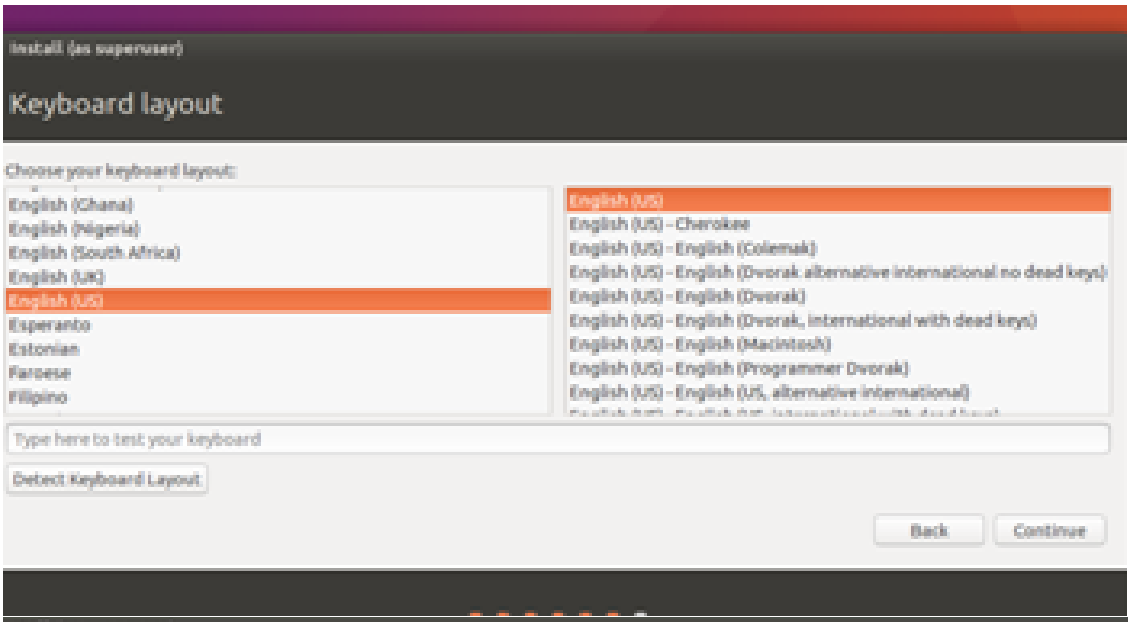
Click on new virtual machine in qemu and perform the following step

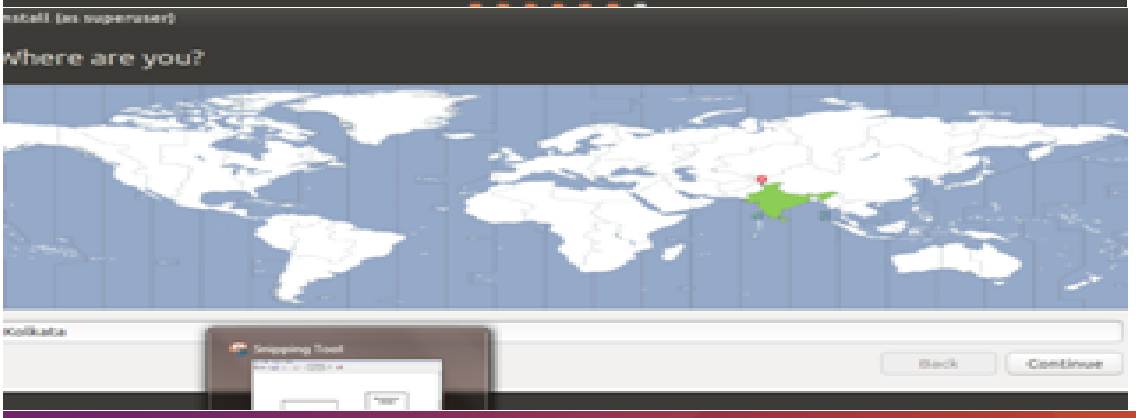


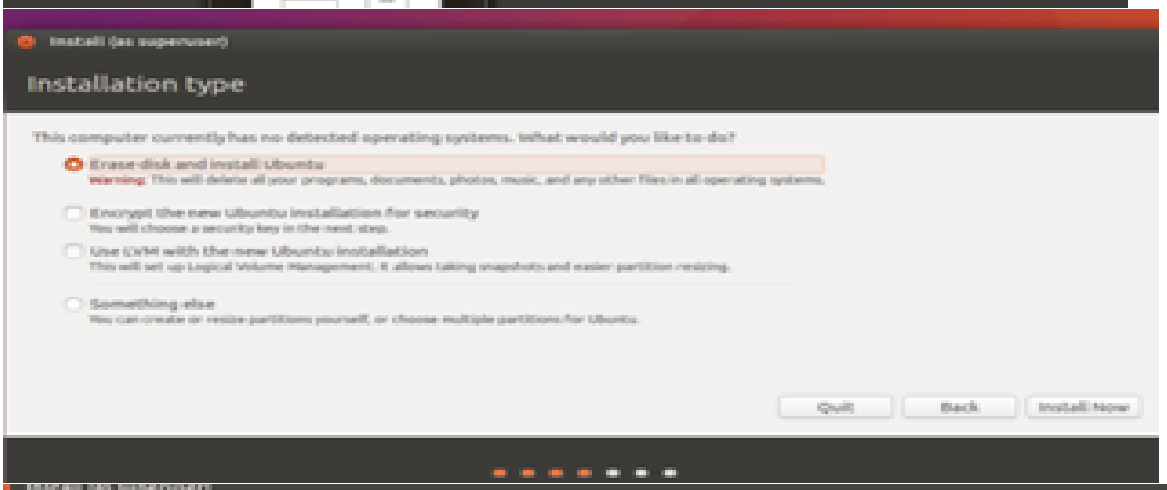

Virtual Machine Manager
New VM
Create a new virtual machine
Step 2 of 5
Name
QEMU/KV
Locate your install media
Use CDROM or DVD
VBox_GAs_5.2.20 (/dev/sr0)
Use ISO image:
Browse...
Automatically detect operating system based on install media
OS type: Unknown
Version: Unknown
Cancel
Back
Forward

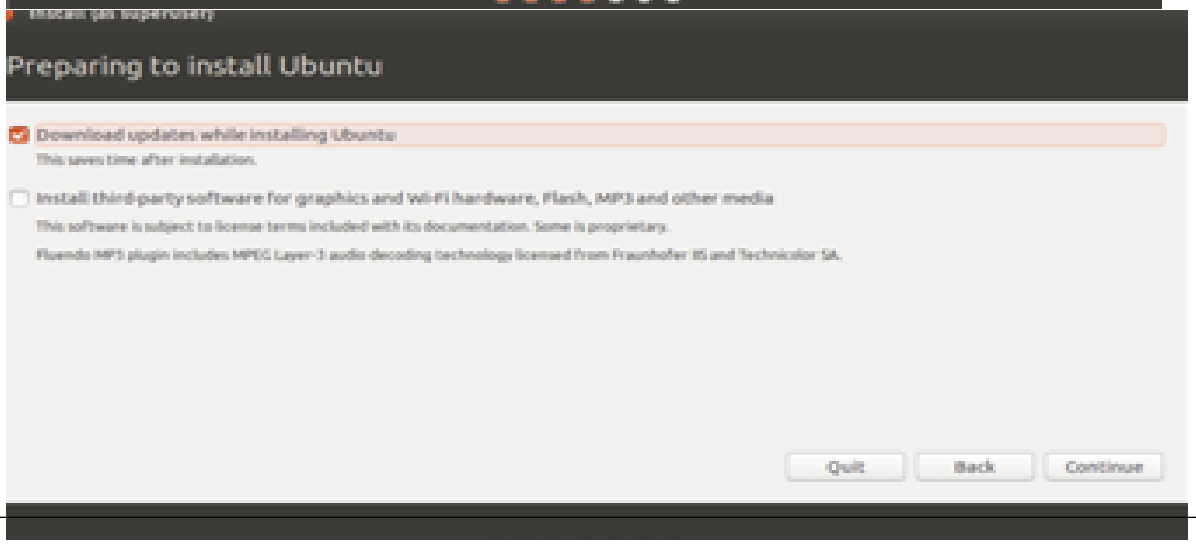

rait@vpm-VirtualBox: ~
rait@vpm-VirtualBox:~$ virt-manager
rait@vpm-VirtualBox:~$
Virtual Machine Manager
New VM
Create a new virtual machine
Step 4 of 5
Name
QEMU/KV
Enable storage for this virtual machine
Create a disk image for the virtual machine
20.1
GiB
50.3 GiB available in the default location
Select or create custom storage
Manage...
Cancel
Back
Forward

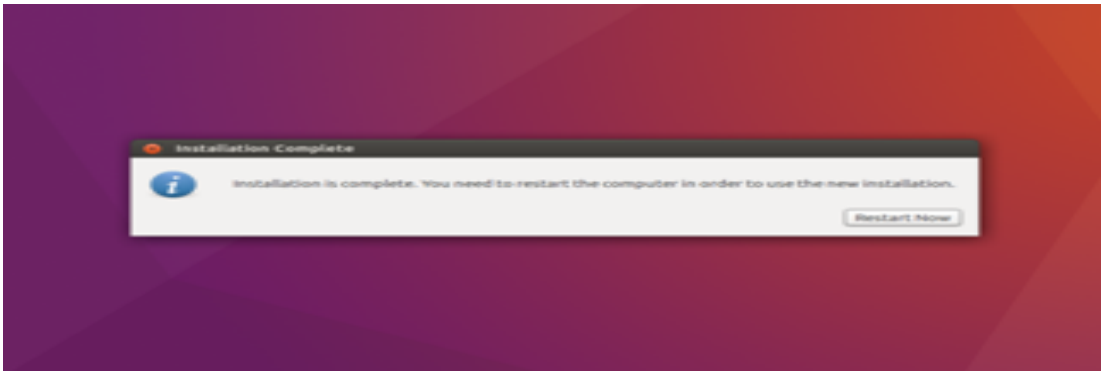

File Machine View Input Devices Help
generic-2 on QEMU/KVM
En
2:17 PM


Install (as superuser)
Keyboard layout
Choose your keyboard layout:
English (Ghana)
English (Nigeria)
English (South Africa)
English (UK)
English (US)
Esperanto
Estonian
Faroese
Filipino
English (US)
English (US) - Cherokee
English (US) - English (Colemak)
English (US) - English (Dvorak alternative international no dead keys)
English (US) - English (Dvorak)
English (US) - English (Dvorak, international with dead keys)
English (US) - English (Macintosh)
English (US) - English (Programmer Dvorak)
English (US) - English (US, alternative international)
Type here to test your keyboard
Detect Keyboard Layout
Back
Continue

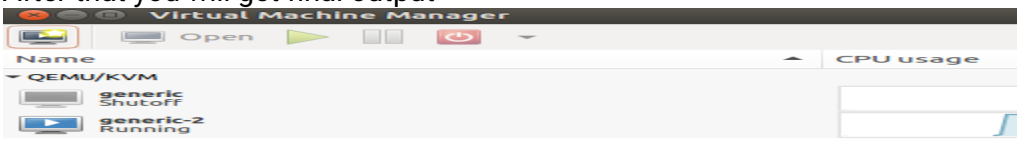

Where are you?
Kolkata
Back
Continue


Install (as superuser)
Installation type
This computer currently has no detected operating systems. What would you like to do?
Erase disk and install Ubuntu
Warning: This will delete all your programs, documents, photos, music, and any other files in all operating systems.
Encrypt the new Ubuntu installation for security
You will choose a security key in the next step.
Use LVM with the new Ubuntu installation
This will set up Logical Volume Management. It allows taking snapshots and easier partition resizing.
Something else
You can create or resize partitions yourself, or choose multiple partitions for Ubuntu.
Quit
Back
Install Now

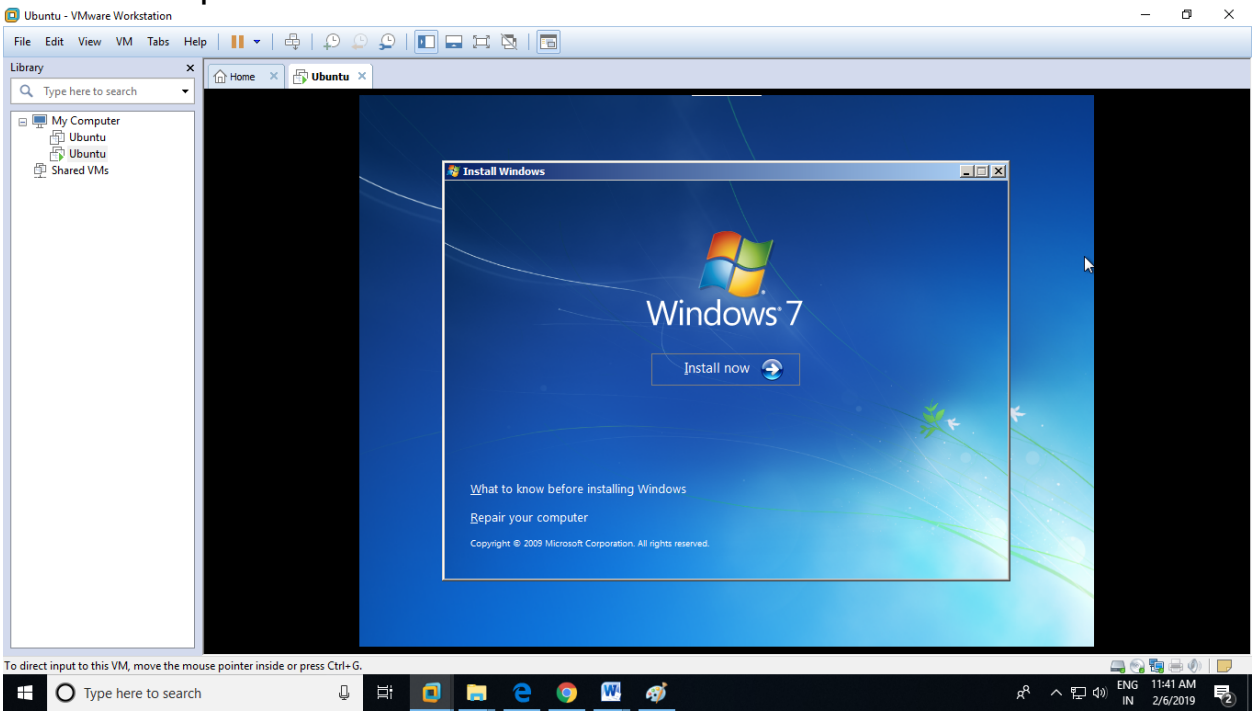

Preparing to install Ubuntu
Download updates while installing Ubuntu
This saves time after installation.
Install third-party software for graphics and Wi-Fi hardware, Flash, MP3 and other media
This software is subject to license terms included with its documentation. Some is proprietary.
Fluendo MP3 plugin includes MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Technicolor SA.
Quit
Back
Continue



After that you will get final output



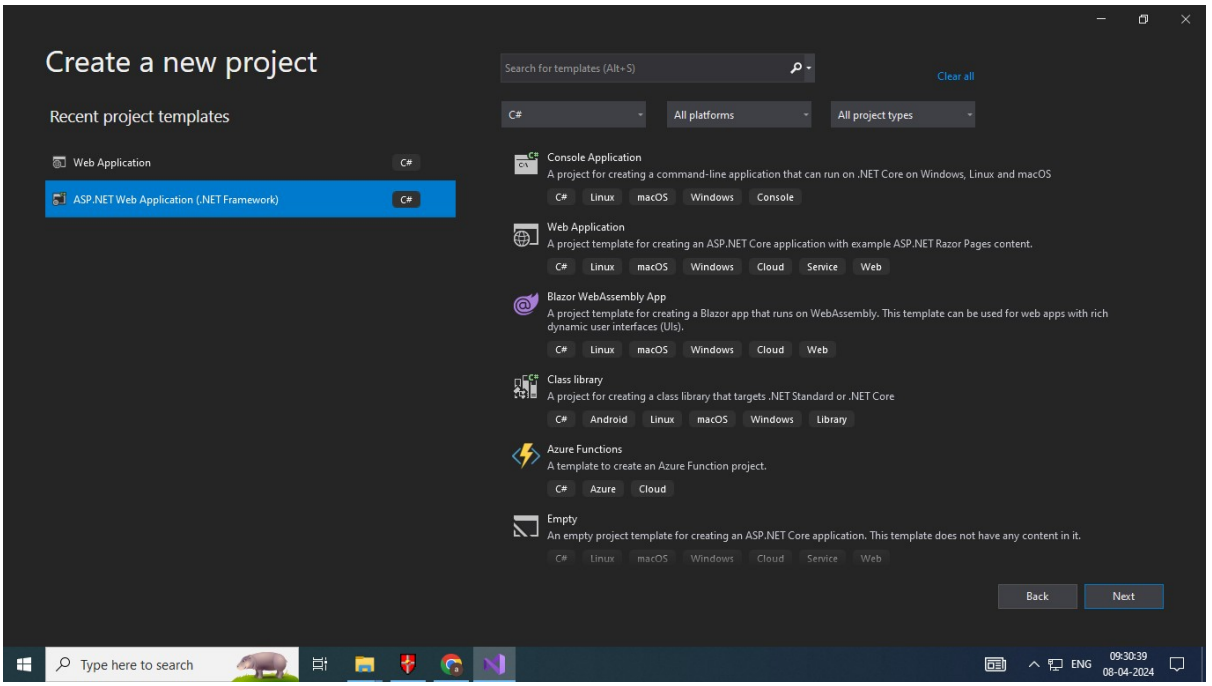
window is open in Ubuntu.



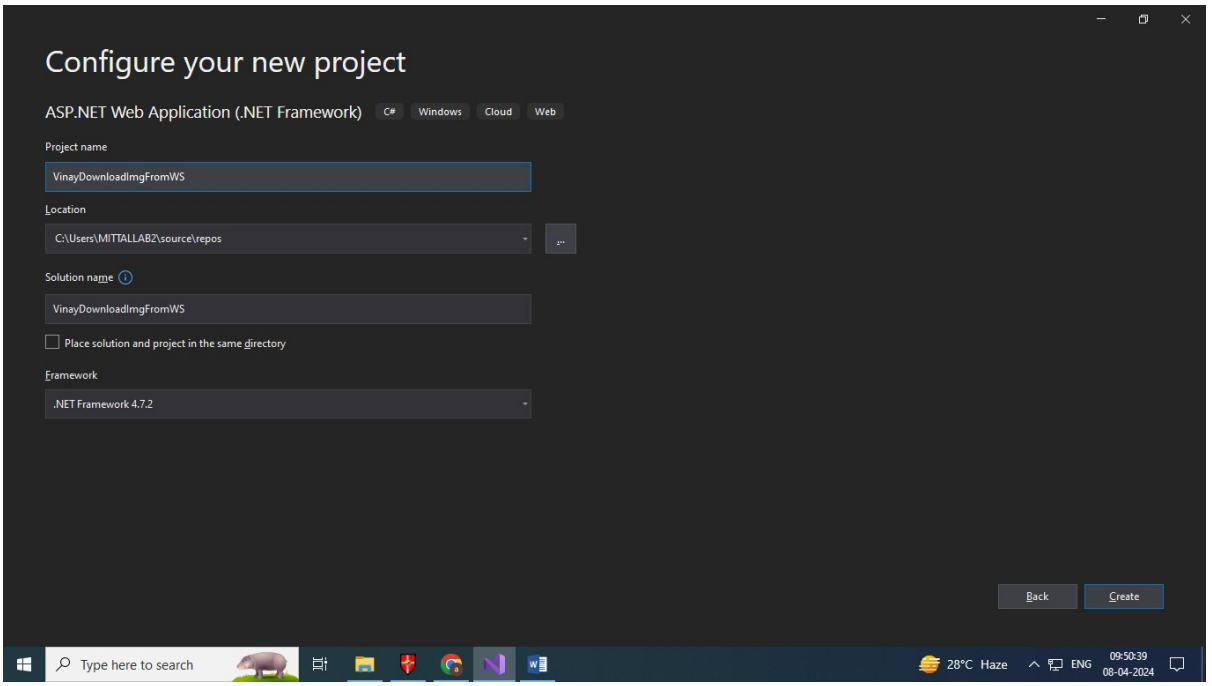
PRACTICAL NO – 6

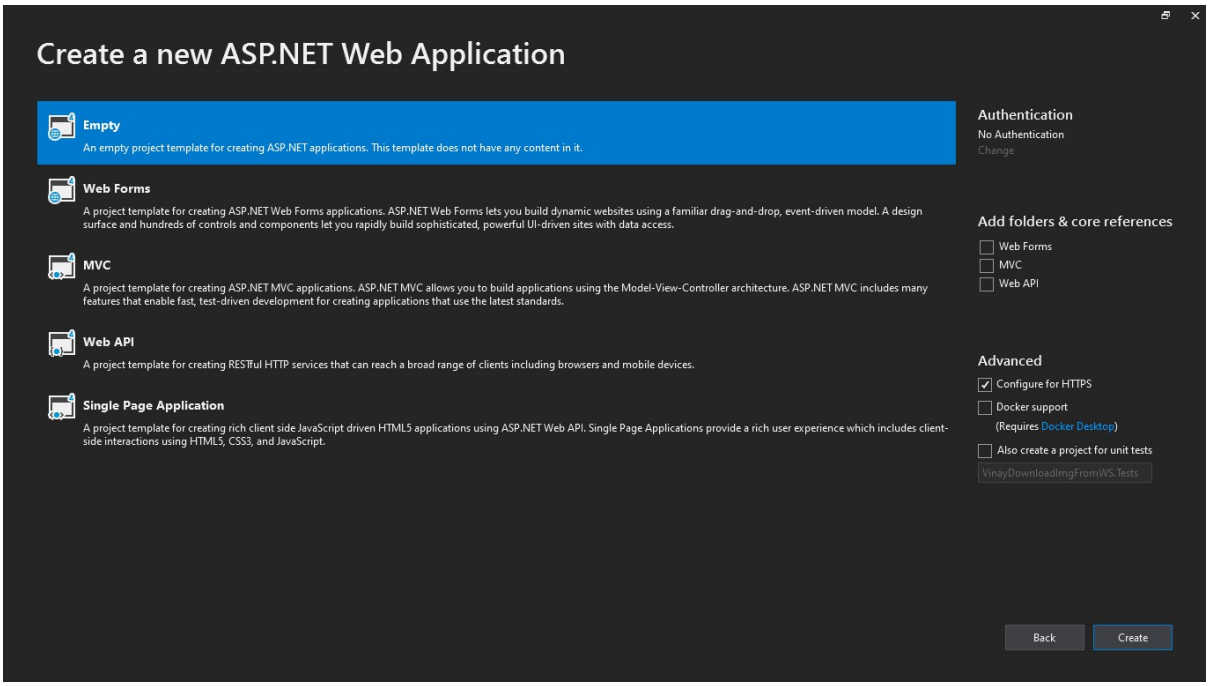
Aim – Download image from server.

1. Open Visual studio and create new project
2. Select ASP.NET Application (.NET Framework)

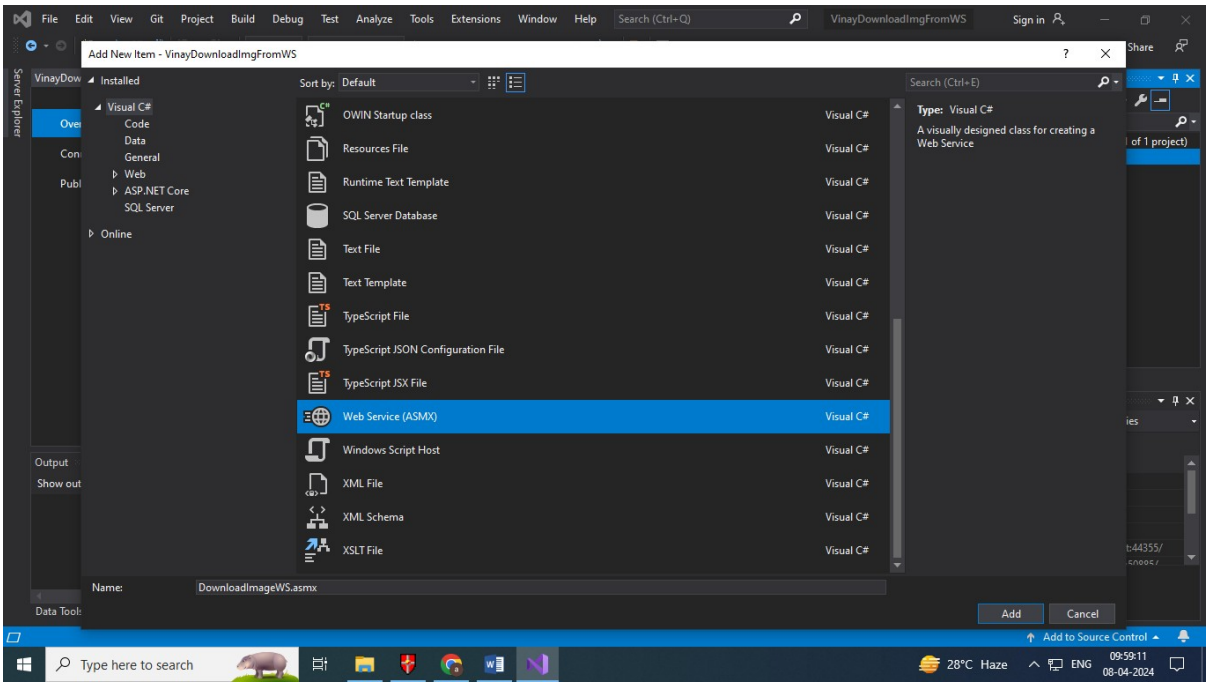


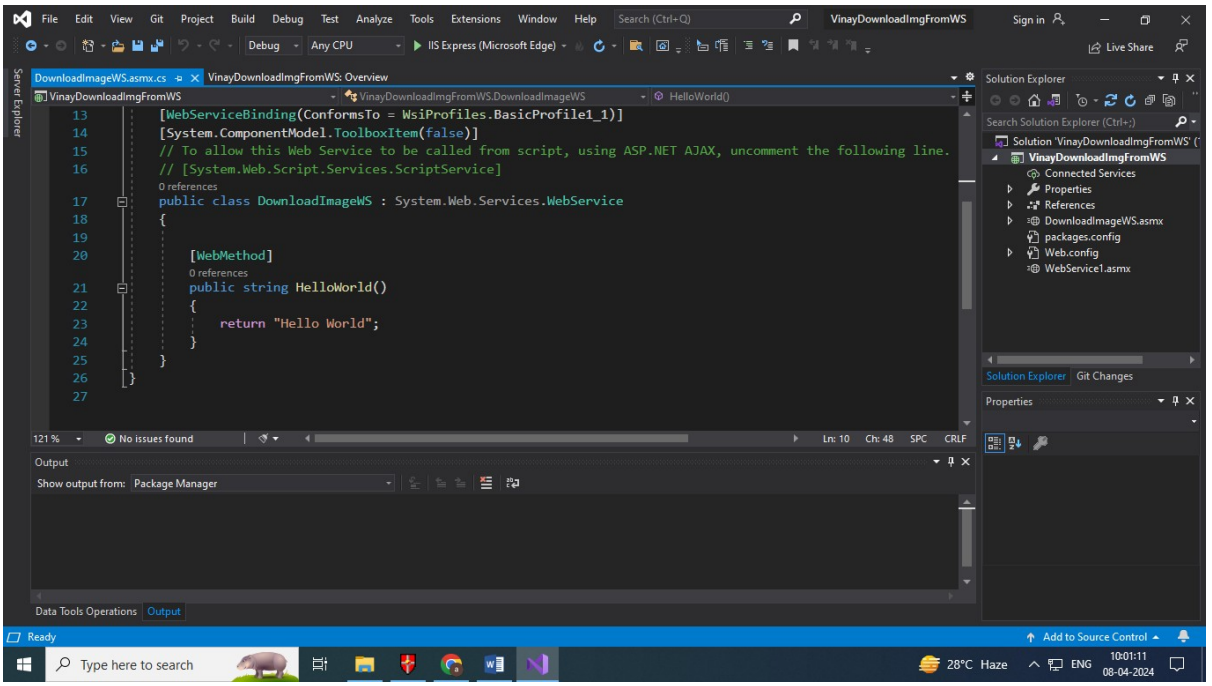
3. Give the project name.





4. After that open solution explorer→Right click on project→Add→New Item→webservice(ASMX) and give the name→Add





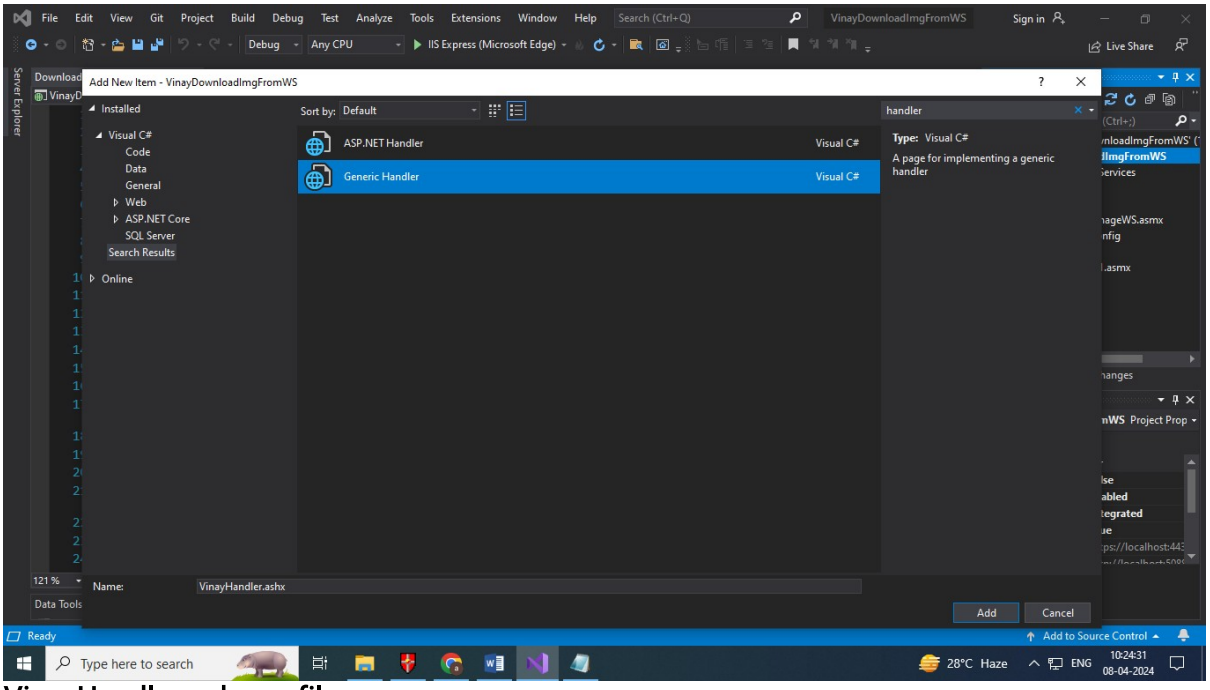
DownloadImageWS.asmx.cs file

```
using System;
using
System.Collections.Generic;
using
System.ComponentModel;
using System.Linq;
using System.Web;
using System.Web.Services;

namespace VinayDownloadImgFromWS
{
   /// <summary>
   /// Summary description for DownloadImageWS
   /// </summary>
   [WebService(Namespace = "http://tempuri.org/")]
   [WebServiceBinding(ConformsTo =
   WsiProfiles.BasicProfile1_1)]
   [System.ComponentModel.ToolboxItem(false)]
   // To allow this Web Service to be called from script, using ASP.NET AJAX,
uncomment thefollowing line.
   // [System.Web.Script.Services.ScriptService]
   public class DownloadImageWS : System.Web.Services.WebService
   {

      [WebMethod]
      public string HelloWorld()
      {
         return "Hello World";
      }


      [WebMethod, Description("Get Image
      Content")]public byte[] GetImageFile(String
      filename)
      {
```

```
if (System.IO.File.Exists(Server.MapPath("~/Images/") + filename))
```

```
        {
            return System.IO.File.ReadAllBytes(Server.MapPath("~/Images") +
            filename);
        }
        else
        {
            return new byte[] { 0 };
        }
    }
}
```

5. Now again right click on project→Add→new item→search handler→select generic handler and give
   name

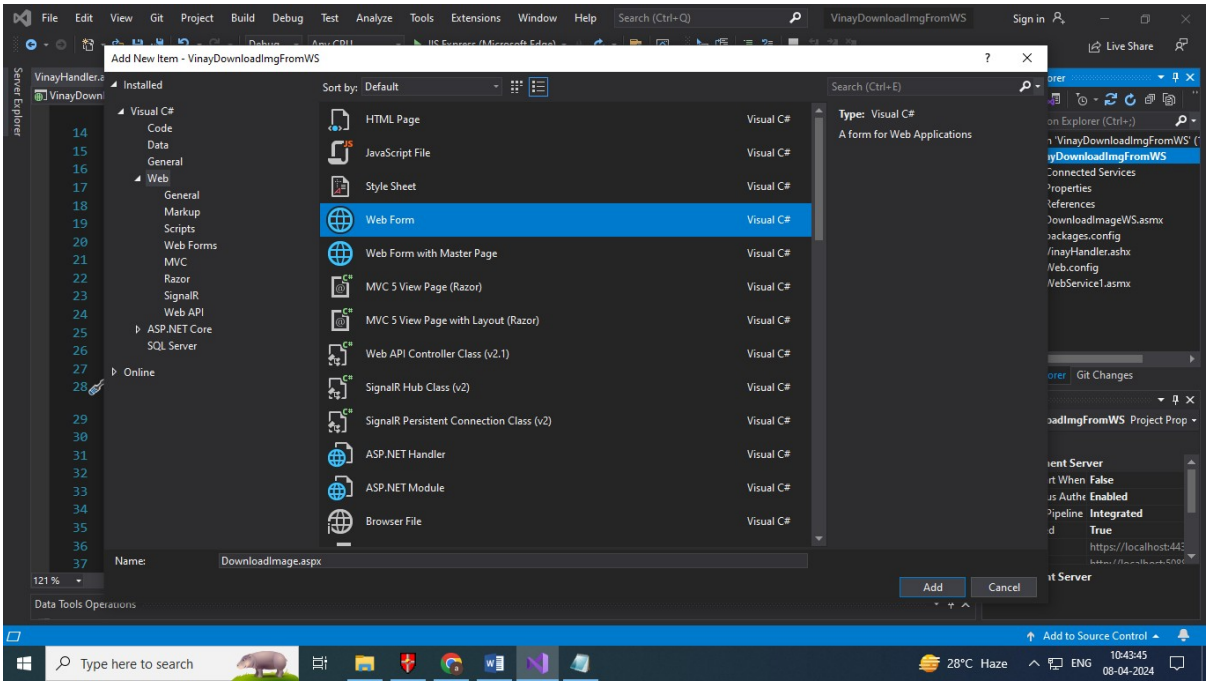


VinayHandler.ashx.cs file

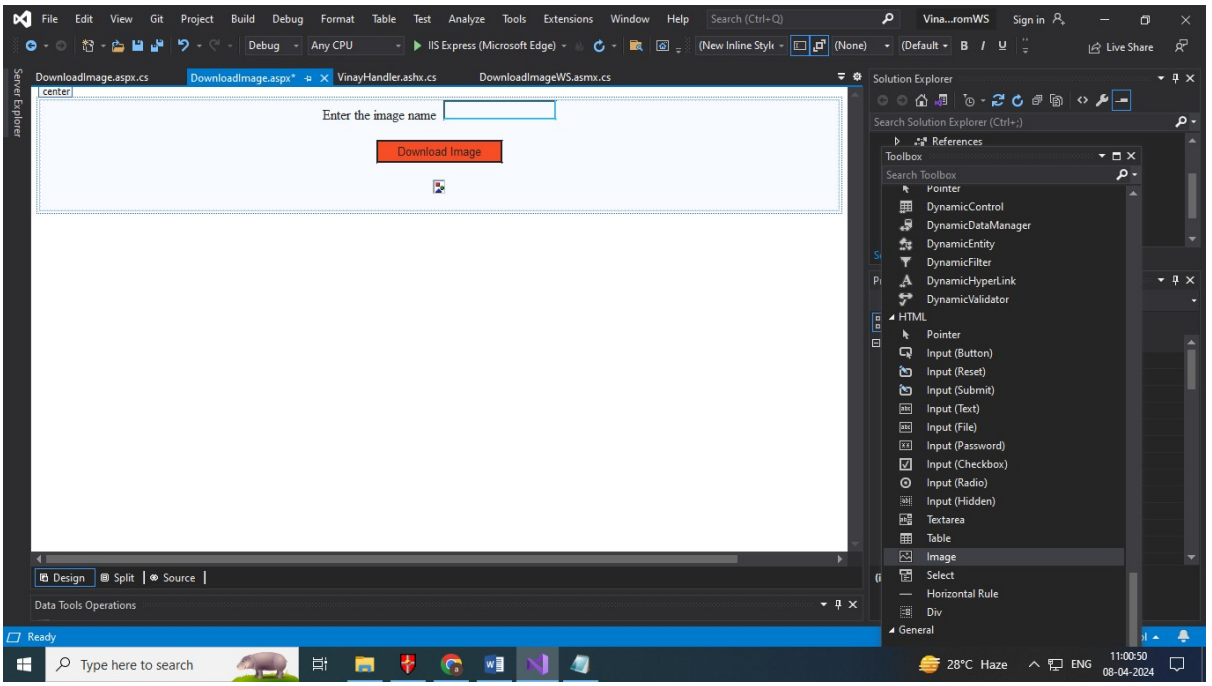
```
using System;
using
System.Collections.Generic;
using System.Linq;
using System.Web;

namespace VinayDownloadImgFromWS
{
    /// <summary>
    /// Summary description for VinayHandler
    /// </summary>
    public class VinayHandler : IHttpHandler
    {

        public void ProcessRequest(HttpContext context)
        {
            DownloadImageWS ws = new DownloadImageWS();
            byte[] binImage =
            ws.GetImageFile(context.Request["filename"]);if
```

```
        }
        else
        {
            context.Response.ContentType =
            "image/jpeg";
            context.Response.BinaryWrite(binImage);
        }
    }

    public bool IsReusable
    {
        get
        {
            return false;
        }
    }
  }
}
```

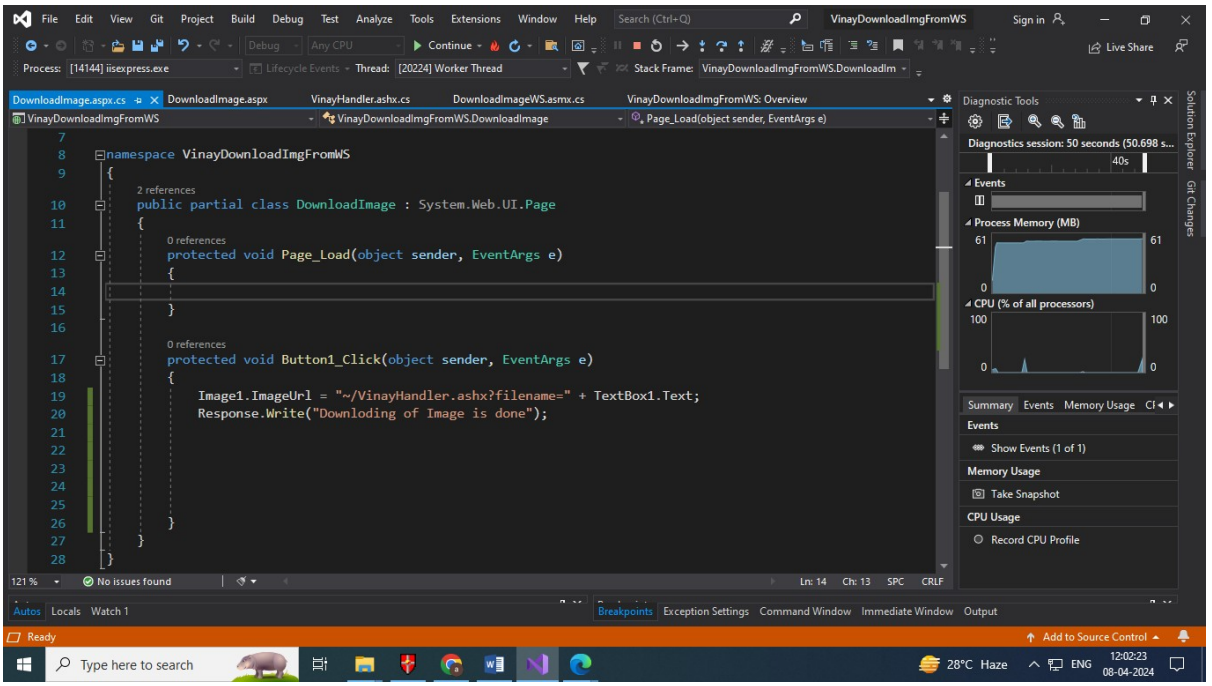
6. Again right click on project→Add→new item→select web form→Give the name



7. Click on View→toolboxt→design the following form

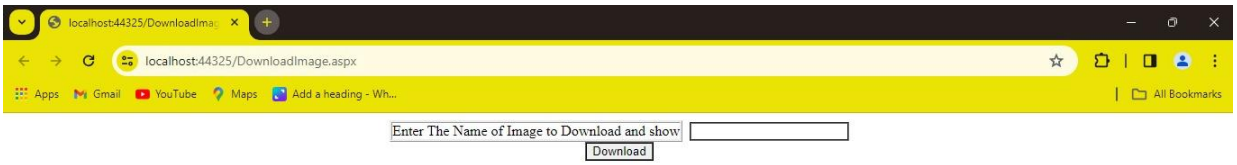


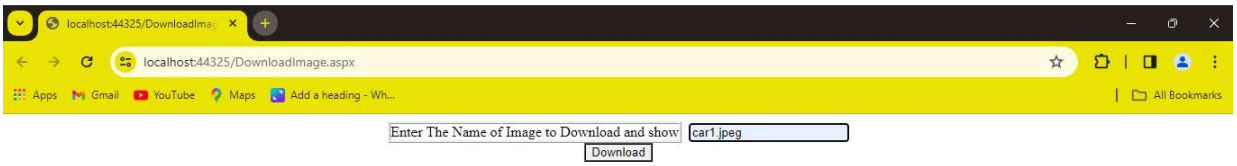
8. Now double click on button and change code

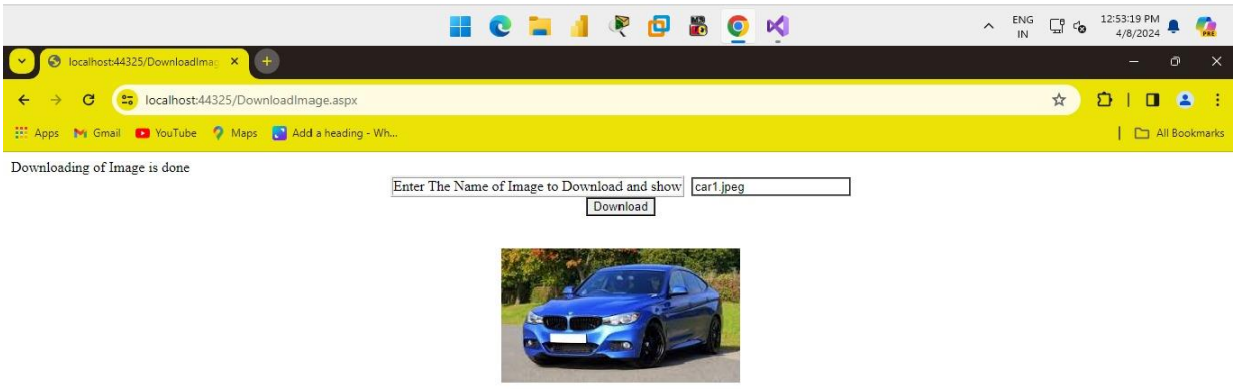


9. Write click on Project and create folder images and paste the images.
10. After that execute the code and Enter the Image name in Textfield.

OUTPUT:


localhost:44325/DownloadImage.aspx
Apps
Gmail
YouTube
Maps
Add a heading - Wh...
All Bookmarks
Enter The Name of Image to Download and show
Download

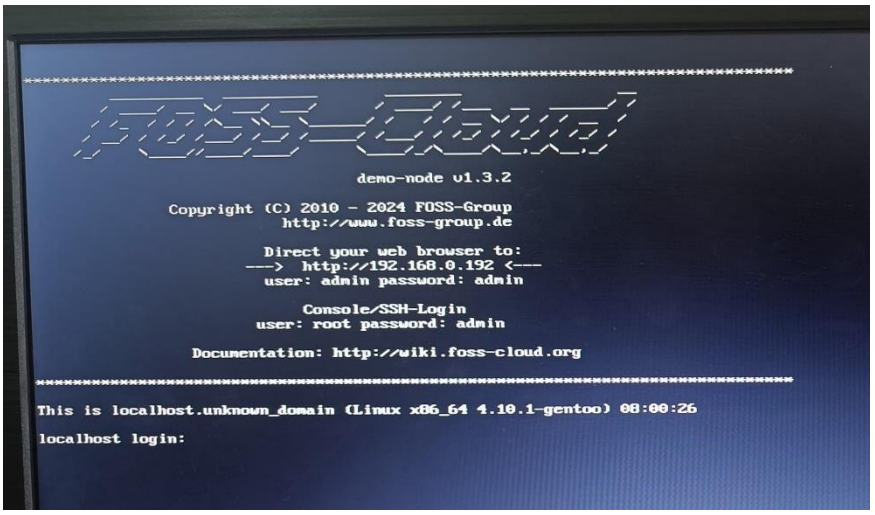

localhost:44325/DownloadImage.aspx
Apps
Gmail
YouTube
Maps
Add a heading - Wh...
All Bookmarks
Enter The Name of Image to Download and show
car1.jpeg
Download


ENG
IN
12:53:19 PM
4/8/2024
localhost:44325/DownloadImage.aspx
Apps
Gmail
YouTube
Maps
Add a heading - Wh...
All Bookmarks
Downloading of Image is done
Enter The Name of Image to Download and show
car1.jpeg
Download

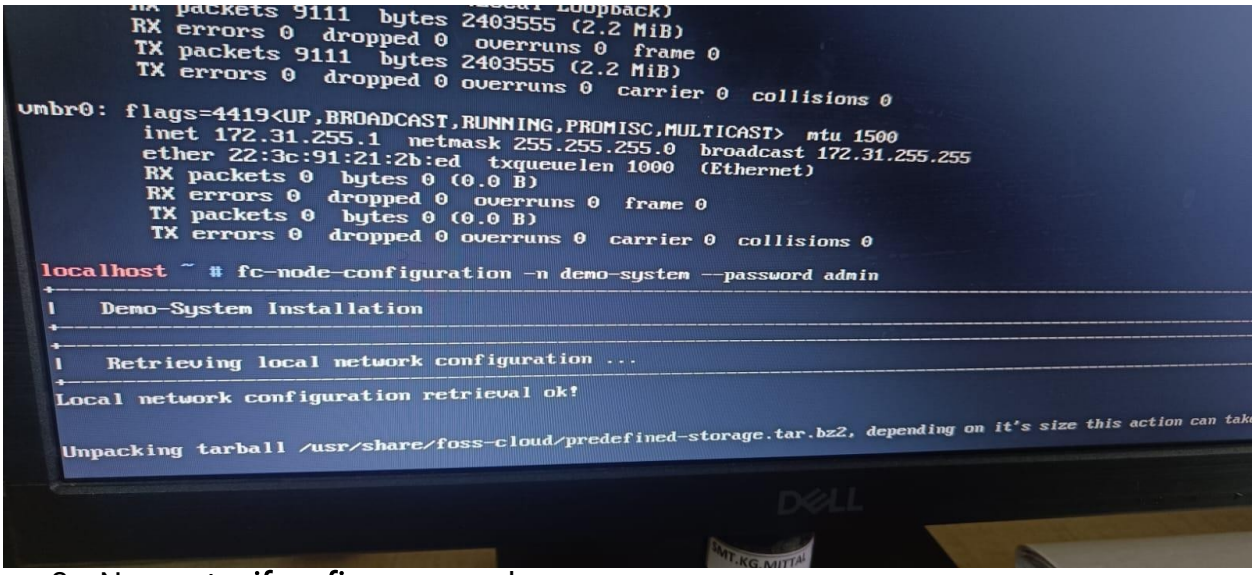
PRACTICAL NO – 7

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

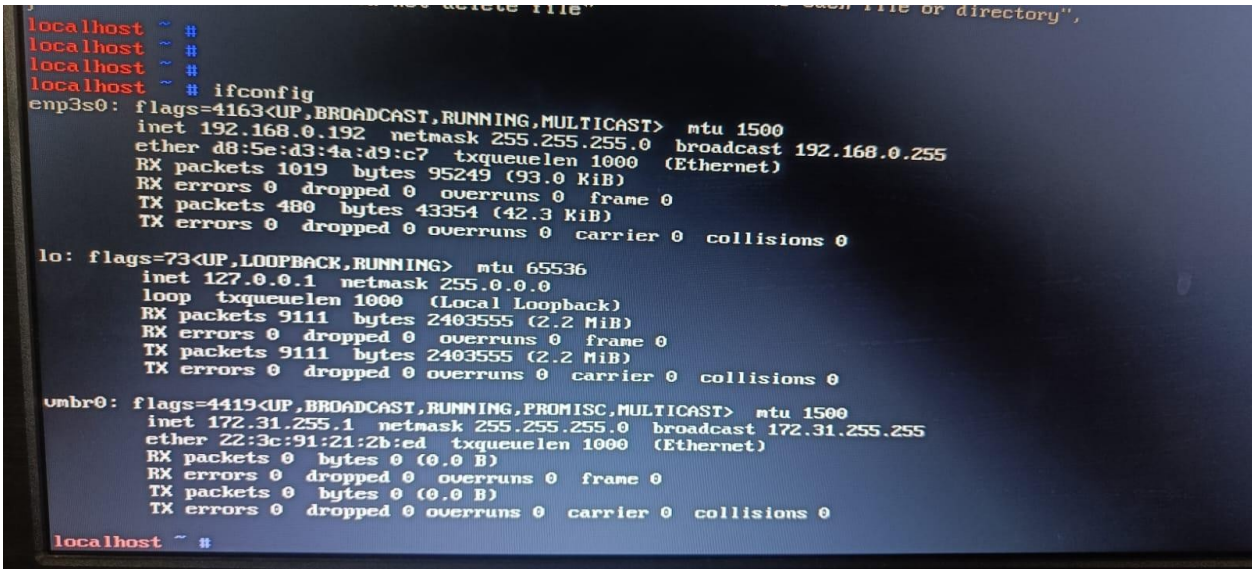
1. Open the System where you have downloaded the FOSS- Cloud.
2. Enter **user-root** & **Password-admin.**



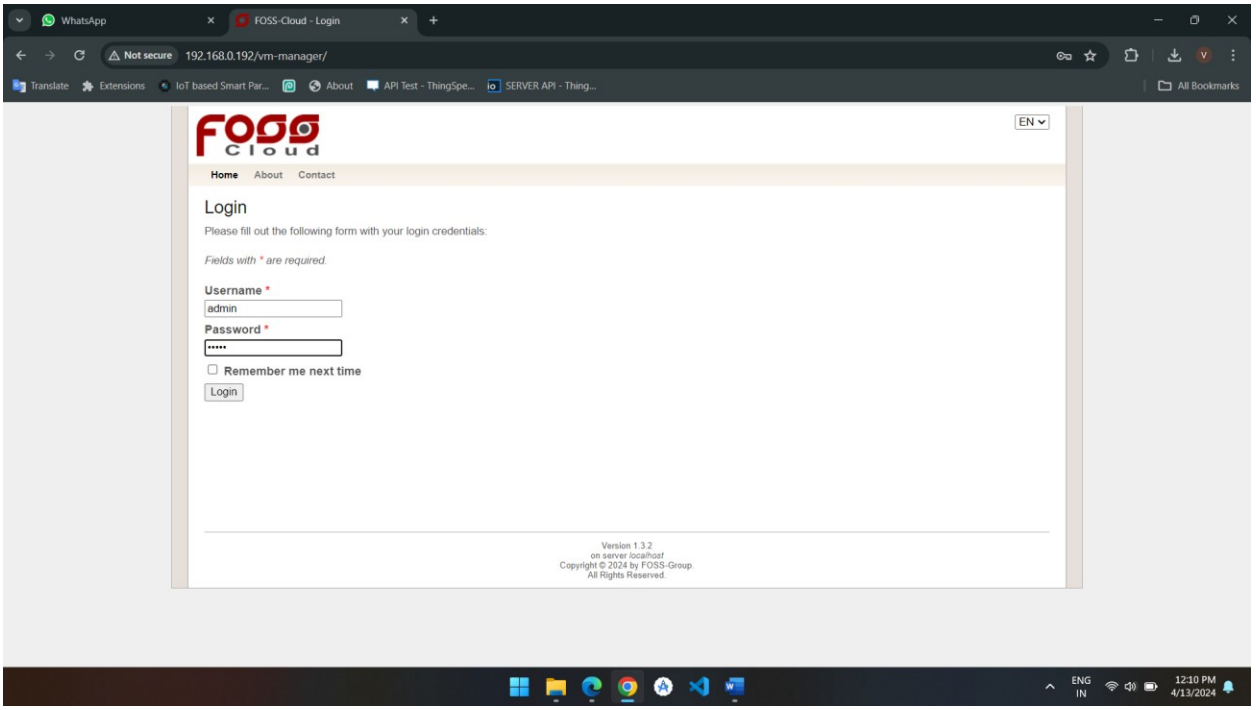
Now Right followingcommand **fc-node- configuration -n demo- system –password admin**



3. Now enter **ifconfig** command.



4. Now copy or save the IP Address (192.168.0.192)
5. Now open the browser of another device and type that IP address in new tab.



6. Username-admin & Password-admin