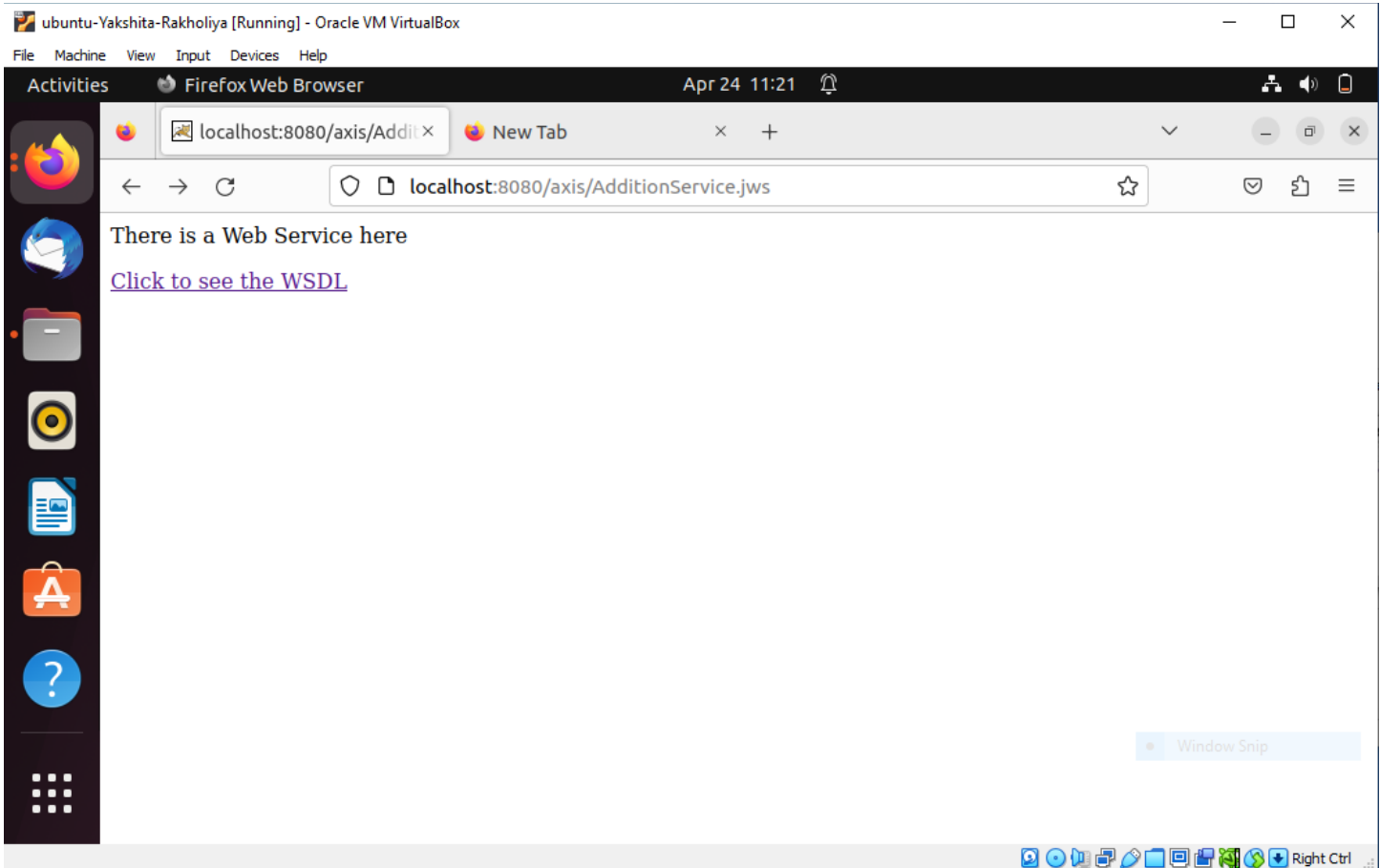


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Project-6

Question 30: Develop a Java web service that supports method “double add(double x, double y)” for returning the summation of two floating point numbers; and develop a Java client program to consume this web service. To convert string “12.5” into floating-point number 12.5, you could use “double d = Double.parseDouble(“12.5”);”.



Question 31: Develop a Java web service client application that consumes the web service that you developed in Question 30.

- a) `SquareIntegerClient.java`
Interface for the web service proxy class to implement
- b) `SquareIntegerServerService.java`
Interface for the factory class of the web service proxy objects (proxy objects are not generated by operator new, but through method calls to a factory object)
- c) `SquareIntegerServerSoapBindingStub.java`
Proxy class source, which implements interface `DoubleAddServer`
- d) `SquareIntegerServerServiceLocator.java`
Factory class of proxy objects; it implements interface `DoubleAddServerService`

The names of these files and the subfolders depend on the URL and contents of the WSDL file. When you create proxy classes for a different web service, you need to change the argument to class WSDL2Java to the URL of the WSDL file of that web service. The resulting proxy class files may have different names and package path, but they should follow the same pattern as our example here.

3. Make a text file SquareIntegerClient.java

Content in the file should be

```
import java.util.Scanner;
public class SquareIntegerClient {
    public static void main(String[] args) throws Exception {
        int value = 0; // value to be squared
        // The program expects to receive an integer on command-line
        // Program quits if there is no such integer
        if (args.length == 1) // there is one command-line argument
            value = Integer.parseInt(args[0]); // parse the string form of integer to an int
        else {
            System.out.println("Usage: java SquareIntegerClient [integer]");
            System.exit(-1); // terminate the program
        }
        // Get the proxy factory
        SquareIntegerServerServiceLocator factory =
            new SquareIntegerServerServiceLocator();
        // Generate the web service proxy object
        SquareIntegerServer proxy = factory.getSquareIntegerServer();
        // Access the web service
        int result = proxy.square(value); // invoke server method to square value
        System.out.println("Square of " + value + " is " + result);
    }
}
```

4. Compile the program

```
javac -cp ~/ws-classes:. SquareIntegerClient.java -source 1.4
```

5. Test the program

```
java -cp ~/ws-classes:. SquareIntegerClient 2
```