

## **CONTENT BEYOND SYLLABUS**

### **IMPLEMENTATION OF REMOTE COMMAND EXECUTION (RCE)**

#### **AIM**

To implement Remote Command Execution(RCE).

#### **ALGORITHM**

##### **CLIENT SIDE**

1. Establish a connection between the Client and Server.

```
Socket client=new Socket("127.0.0.1",6555);
```

2. Create instances for input and output streams.

```
Print Stream ps=new Print Stream(client.getOutputStream());
```

3. `BufferedReader br=new BufferedReader(new InputStreamReader(System.in));`

4. Enter the command in Client Window.

Send the message to its output

```
str=br.readLine();
```

```
ps.println(str);
```

##### **SERVER SIDE**

1. Accept the connection request by the client.

```
ServerSocket server=new ServerSocket(6555);
```

```
Sockets=server.accept();
```

2. Get the IP address from its input stream.

```
BufferedReader br1=new BufferedReader(new InputStreamReader(s.getInputStream()));
```

```
ip=br1.readLine();
```

3. During runtime execute the process

```
Runtime r=Runtime.getRuntime();
```

```
Process p=r.exec(str);
```

##### **CLIENT PROGRAM**

```
import java.io.*;
```

```
import java.net.*;
```

```
class clientRCE
```

```
{
```

```

public static void main(String args[]) throws IOException
{
    try
    {
        String str;Socket client=new Socket("127.0.0.1",6555);
        PrintStream ps=new PrintStream(client.getOutputStream());
        BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
        System.out.println("\t\t\tCLIENT WINDOW\n\n\t\tEnter TheCommand:");
        str=br.readLine();
        ps.println(str);
    }
    catch(IOException e)
    {
        System.out.println("Error"+e); }
    }
}

```

### **SERVER PROGRAM**

```

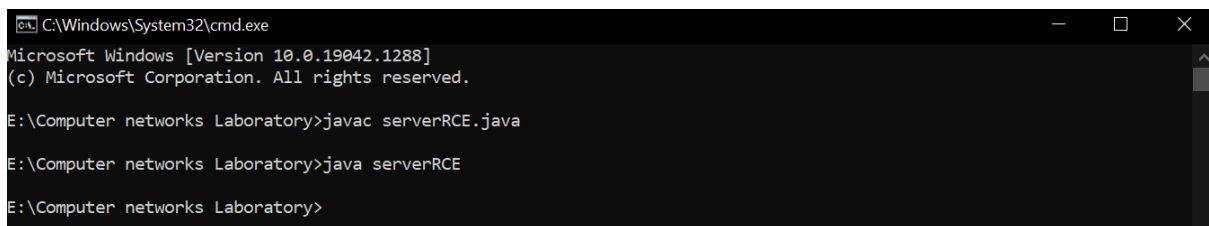
import java.io.*;
import java.net.*;
class serverRCE
{
    public static void main(String args[]) throws IOException
    {
        try
        {
            String str;
            ServerSocket server=new ServerSocket(6555);
            Socket s=server.accept();
            BufferedReader br=new BufferedReader(new InputStreamReader(s.getInputStream()));
            str=br.readLine();

```

```
Runtime r=Runtime.getRuntime();  
Process p=r.exec(str);  
}  
catch(IOException e)  
{  
System.out.println("Error"+e);  
}  
}  
}
```

## OUTPUT

C:\NetworkingPrograms>java serverRCE

A screenshot of a Windows command prompt window. The title bar shows 'C:\Windows\System32\cmd.exe'. The window content displays the following text:

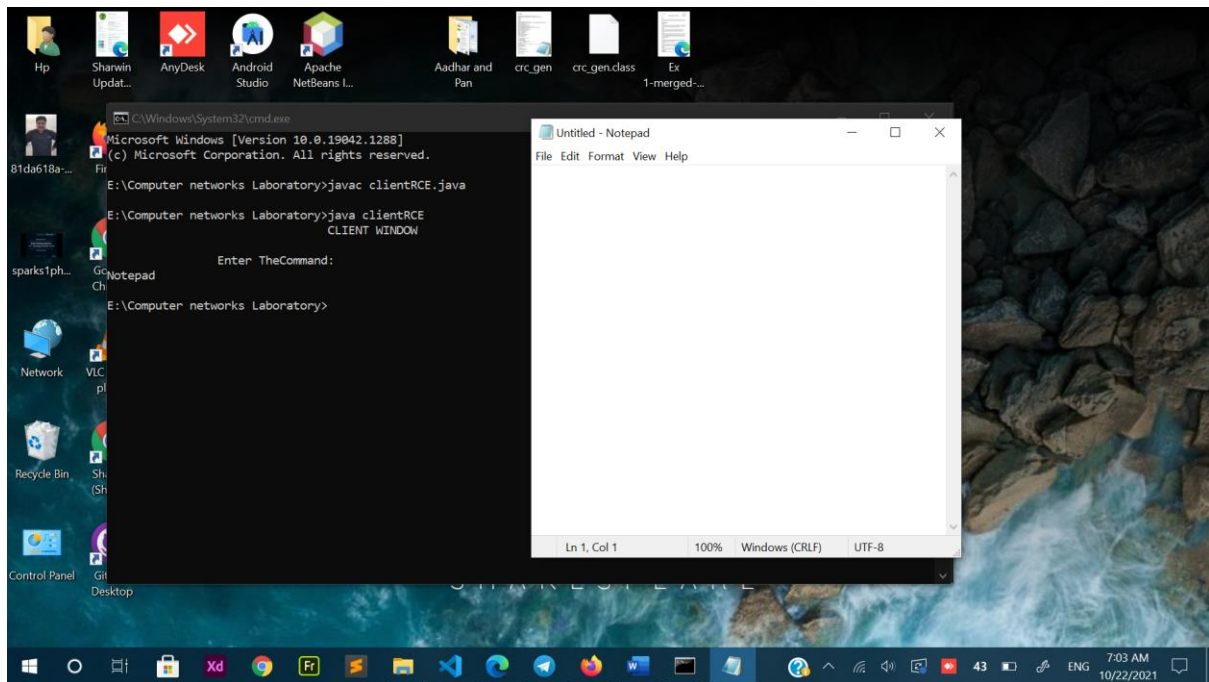
```
Microsoft Windows [Version 10.0.19042.1288]  
(c) Microsoft Corporation. All rights reserved.  
  
E:\Computer networks Laboratory>javac serverRCE.java  
  
E:\Computer networks Laboratory>java serverRCE  
  
E:\Computer networks Laboratory>
```

C:\NetworkingPrograms>java clientRCE

## CLIENT WINDOW

EnterTheCommand:

Notepad



## RESULT

Thus the implementation RCE is done & executed successfully.