

IMPLEMENTATION OF REMOTE COMMAND EXECUTION (RCE)

DATE: 23.10.2021

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. BufferedReaderbr=newBufferedReader(newInputStreamReader(System.in));
4. Enter the command in Client Window.
Send themessage 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. Getthe IPaddressfromitsinputstream.
BufferedReaderbr1=newBufferedReader(newInputStreamReader(s.getInputStream()));
ip=br1.readLine();
3. During runtime execute the process
Runtime r=Runtime.getRuntime();
Process p=r.exec(str);

CODE:

CLIENT PROGRAM

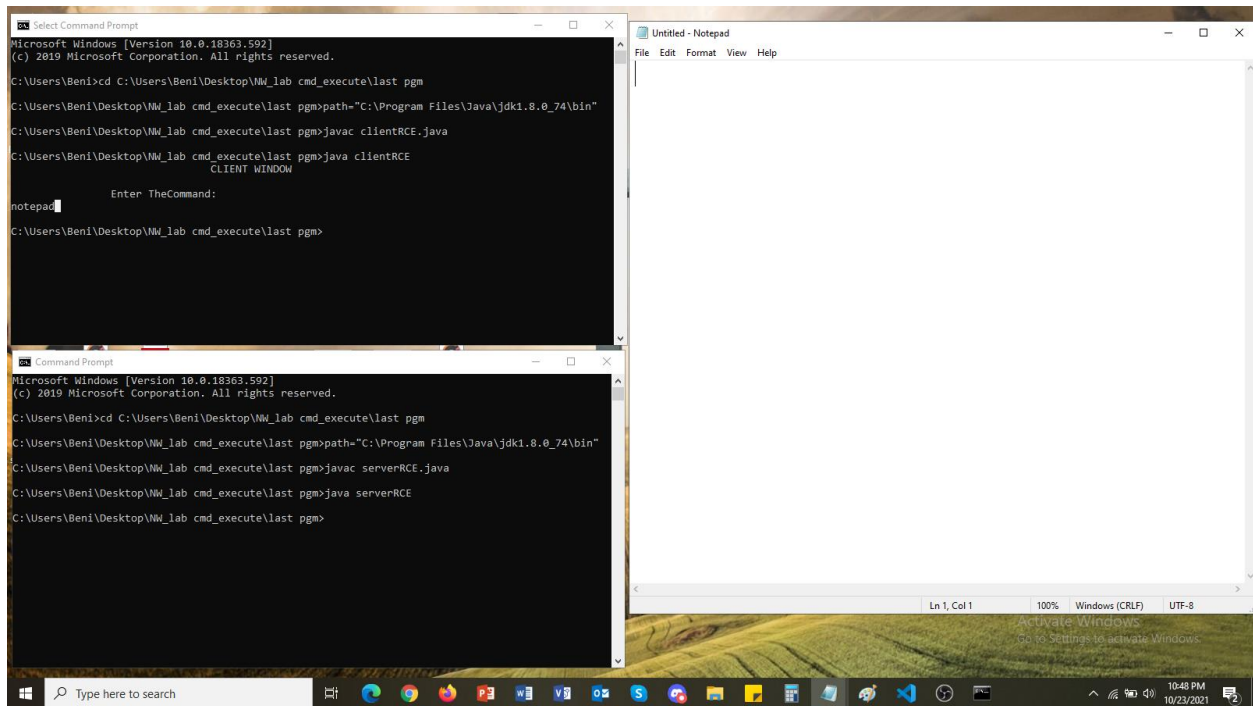
```
import java.io.*;
import java.net.*;
class clientRCE
{
public static void main(String args[]) throws IOException
{
```

```
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



The screenshot displays a Windows desktop environment. In the foreground, there are two overlapping windows. The top window is titled 'Select Command Prompt' and shows a series of commands being entered into a black command prompt window. The commands are: `cd C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm`, `path="C:\Program Files\Java\jdk1.8.0_74\bin"`, `javac clientRCE.java`, and `java clientRCE`. The bottom window is titled 'Command Prompt' and shows the same sequence of commands, but with the addition of `serverRCE.java` and `java serverRCE`. To the right of these windows is a Notepad window titled 'Untitled - Notepad', which is currently empty. The Windows taskbar at the bottom shows various application icons and the system clock indicating 10:48 PM on 10/23/2021.

```
Microsoft Windows [Version 10.0.18363.592]
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C:\Users\Beni>cd C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>path="C:\Program Files\Java\jdk1.8.0_74\bin"
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>javac clientRCE.java
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>java clientRCE
CLIENT WINDOW

notepad Enter TheCommand:
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>

Microsoft Windows [Version 10.0.18363.592]
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C:\Users\Beni>cd C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>path="C:\Program Files\Java\jdk1.8.0_74\bin"
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>javac serverRCE.java
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>java serverRCE
C:\Users\Beni\Desktop\VM_lab cmd_execute\last pgm>
```

RESULT

Thus the implementation RCE is done & executed successfully.