

Assignment 1B

Name : Omkar Deshpande

Roll No: 43212

Problem statement - To develop any distributed application through implementing client-server communication programs based on JAVA RMI.

Code:
SERVER

```
//program for server application
import java.rmi.*;
import java.rmi.registry.*;
public class Server
{
    public static void main(String args[])
    {
        try
        {
            Transfer obj = new TransferFile();

            // rmiregistry within the server JVM with
            // port number 1900
            LocateRegistry.createRegistry(1900);

            Naming.rebind("rmi://localhost:1900"+
                          "/getTransferFunc",obj);
        }
        catch(Exception ae)
        {
            System.out.println(ae);
        }
    }
}
```

```
    }  
}  
}
```

TRANSFER.JAVA

```
import java.rmi.*;  
public interface Transfer extends Remote  
{  
    // Declaring the method prototype  
    public String transfer(String filename) throws Exception;  
}
```

TRANSFERFILE.JAVA

```
import java.io.File;  
import java.io.FileWriter;  
import java.io.IOException;  
import java.rmi.*;  
import java.rmi.server.*;  
  
public class TransferFile extends UnicastRemoteObject  
    implements Transfer  
{  
  
    TransferFile() throws RemoteException  
    {  
        super();  
    }  
  
    public String transfer(String str)  
        throws Exception  
    {  
        File f = new File(str);  
        FileWriter fw = new FileWriter(f);  
        fw.write(str);  
        fw.close();  
        return str;  
    }  
}
```

```

String[] temp = str.split("###",2);
File obj = new File(temp[0]);

if(obj.createNewFile()) {
    String str;
    FileWriter fileWrite = new FileWriter(temp[0]);

    fileWrite.write(temp[1]);

    fileWrite.close();
}
return "Done";
}
}

```

CLENTREQUEST.JAVA

```

//program for client application
import java.io.BufferedReader;
import java.io.File;
import java.io.InputStreamReader;
import java.rmi.*;
import java.util.Scanner;
public class ClientRequest
{
    public static void main(String args[])
    {
        String answer,str = null;
        try
        {
            System.out.print("Enter the file name : ");
            BufferedReader keyRead = new BufferedReader(new
InputStreamReader(System.in));
            String fname = keyRead.readLine();
            File obj = new File(fname);

            if(obj.exists()) {
                str=fname + "###";
            }
        }
        catch (Exception e) {
            System.out.println("Error: " + e.getMessage());
        }
    }
}

```

```
Scanner fileRead = new Scanner(obj);

    while(fileRead.hasNextLine())
    {
        str += fileRead.nextLine();
    }
    fileRead.close();
}
else
    System.out.println("File does not exist !");
Transfer access =
(Transfer)Naming.lookup("rmi://localhost:1900"+ "/getTransferFunc");

    answer = access.transfer(str);
    System.out.println(answer);

}
catch(Exception ae)
{
    System.out.println(ae);
}
}
```

OUTPUT

The screenshot displays three overlapping Windows command prompt windows. The top-left window, titled 'C:\Windows\System32\cmd.exe - java Server', shows the execution of 'java Server' from the directory 'D:\BE_SEM_8\CL_9\Assignment_1b\remote'. The top-right window, titled 'C:\Windows\System32\cmd.exe', shows the execution of 'java ClientRequest' from 'D:\BE_SEM_8\CL_9\Assignment_1b\client', which prompts for a file name ('data.txt') and then displays 'Done'. The bottom window, titled 'Command Prompt - rmdir', shows the execution of 'rmdir' from 'C:\Users\Omkar>'. The Windows taskbar at the bottom includes a search bar, task view, and several application icons, with the system clock showing 11:23 AM on 3/8/2021.

```
C:\Windows\System32\cmd.exe - java Server
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.

D:\BE_SEM_8\CL_9\Assignment_1b\remote>java Server

C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.

D:\BE_SEM_8\CL_9\Assignment_1b\client>java ClientRequest
Enter the file name : data.txt
Done

D:\BE_SEM_8\CL_9\Assignment_1b\client>

Command Prompt - rmdir
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\Omkar>rmdir
```