

## Practical No.: 2.2

**Aim: Implement a DateTime Server containing date() and time() using RPC**

### Server

*File → New Project → Java Application → Project Name: RPC\_Server → Finish*

### Source Code:

---

```
package rpc_server;

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStream;
import java.io.InputStreamReader;
import java.io.OutputStream;
import java.io.PrintWriter;
import java.net.ServerSocket;
import java.net.Socket;
import java.text.DateFormat;
import java.text.SimpleDateFormat;
import java.util.Date;

/**
 *
 * @author TechnoBoy
 */
public class RPC_Server {

    public static void main(String[] args) throws IOException {

        ServerSocket ss=new ServerSocket(4000);

        System.out.println("Server Ready!!!");

        Socket sock=ss.accept();

        System.out.println("Client Connected");

        BufferedReader keyRead=new BufferedReader(new InputStreamReader(System.in));
```

```
OutputStream ostream=sock.getOutputStream();

PrintWriter pwrite=new PrintWriter(ostream,true);

InputStream istream=sock.getInputStream();

BufferedReader receiveRead=new BufferedReader(new InputStreamReader(istream));

String op;

while(true)
{
    op=receiveRead.readLine();

    System.out.println("Operation : "+op);

    if(op.compareTo("date")==0)
    {
        DateFormat dateFormat = new SimpleDateFormat("dd/MM/yyyy");

        Date date = new Date();

        System.out.println("Date : "+dateFormat.format(date));

        pwrite.println("Date : "+dateFormat.format(date));

    }
    else if(op.compareTo("time")==0)
    {
        DateFormat dateFormat = new SimpleDateFormat("HH:mm:ss");

        Date date = new Date();

        System.out.println("Date : "+dateFormat.format(date));

        pwrite.println("Date : "+dateFormat.format(date));

    }
    System.out.flush();
}

}
```

---

## Client

Right Click on Project → New → Java Class-> Class Name: *RPC\_Client*→ package : *RPC\_Server*→ Finish

```
package rpc_server;
```

```
import java.io.BufferedReader;
```

```
import java.io.InputStream;
```

```
import java.io.InputStreamReader;
```

```
import java.io.OutputStream;
```

```
import java.io.PrintWriter;
```

```
import java.net.Socket;
```

```
/**
```

```
 *
```

```
 * @author TechnoBoy
```

```
 */
```

```
public class RPC_Client
```

```
{
```

```
    public static void main(String[] args) throws Exception
```

```
    {
```

```
        Socket sock = new Socket("127.0.0.1", 4000);
```

```
        BufferedReader keyRead = new BufferedReader(new InputStreamReader(System.in));
```

```
        OutputStream ostream = sock.getOutputStream();
```

```
        PrintWriter pwrite = new PrintWriter(ostream, true);
```

```
        InputStream istream = sock.getInputStream();
```

```
        BufferedReader receiveRead = new BufferedReader(new InputStreamReader(istream));
```

```
        System.out.println("Client ready, type and press Enter key");
```

```
        String receiveMessage, sendMessage,temp;
```

```
        while(true)
```

```
        {
```

```
            System.out.println("\nEnter operation to perform(date,time)....");
```

```
            temp = keyRead.readLine();
```

```

sendMessage=temp.toLowerCase();

pwrite.println(sendMessage);

System.out.flush();

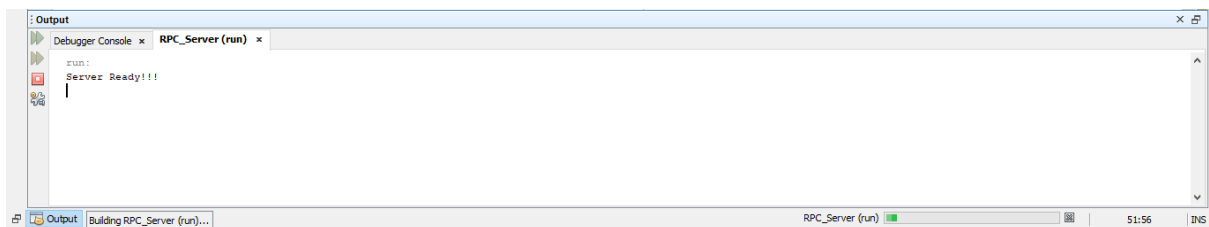
if((receiveMessage = receiveRead.readLine()) != null)

    System.out.println(receiveMessage);
}
}
}

```

## Output

Run → RPC\_Server



Run → RPC\_Client



After Execution → RPC\_Server

