



ANJUMAN-I-ISLAM'S KALSEKAR TECHNICAL CAMPUS
School of Engineering & Technology

Affiliated to : University of Mumbai, Recognised by : DTE (Maharashtra) & Approved by : AICTE (New Delhi)

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Class: BE-CO	Batch: 01
Roll no: 18CO48	Experiment No: 02

Aim : Client / Server using RPC.

Code:

Client.java

```
int a, b, c;
```

```
while (true) {  
    fun = receiveRead.readLine();  
    if (fun != null) {  
        System.out.println("Operation : " + fun);  
    }  
    a = Integer.parseInt(receiveRead.readLine());  
    System.out.println("Parameter 1 : " + a);  
    b = Integer.parseInt(receiveRead.readLine());  
    if (fun.compareTo("add") == 0) {  
        c = a + b;  
        System.out.println("Addition = " + c);  
        pwrite.println("Addition = " + c);  
    }  
    if (fun.compareTo("sub") == 0) {  
        c = a - b;  
        System.out.println("Subtraction = " + c);  
        pwrite.println("Subtraction = " + c);  
    }  
    if (fun.compareTo("mul") == 0) {  
        c = a * b;  
        System.out.println("Multiplication = " + c);  
    }  
}
```

```

        pwrite.println("Multiplication = " + c);
    }
    if (fun.compareTo("div") == 0) {
        c = a / b;
        System.out.println("Division = " + c);
        pwrite.println("Division = " + c);
    }
    System.out.flush();
}
}
}

```

```

aikt@aiktc22:~$ cd Desktop/dc-exp-02/
aikt@aiktc22:~/Desktop/dc-exp-02$ javac cli.java
cli.java:31: error: reached end of file while parsing
}
^
1 error
aikt@aiktc22:~/Desktop/dc-exp-02$ javac cli.java
aikt@aiktc22:~/Desktop/dc-exp-02$ java cli
Client ready, type and press Enter key

Enter operation to perform(add,sub,mul,div)....
add
Enter first parameter :
15
Enter second parameter :
15
Addition = 30

Enter operation to perform(add,sub,mul,div)....
mul
Enter first parameter :
67
Enter second parameter :
56
Multiplication = 3752

Enter operation to perform(add,sub,mul,div)....
div
Enter first parameter :
64876
Enter second parameter :
46
Division = 1410

Enter operation to perform(add,sub,mul,div)....

```

Code:

Server.java

```

import java.io.*;
import java.net.*;
class cli {
    public static void main(String[] args) throws Exception {
        Socket sock = new Socket("127.0.0.1", 3000);
        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(add,sub,mul,div)....");
    temp = keyRead.readLine();
    sendMessage = temp.toLowerCase();
    pwrite.println(sendMessage);
    System.out.println("Enter first parameter :");
    sendMessage = keyRead.readLine();
    pwrite.println(sendMessage);
    System.out.println("Enter second parameter : ");
    sendMessage = keyRead.readLine();
    pwrite.println(sendMessage);
    System.out.flush();
    if ((receiveMessage = receiveRead.readLine()) != null) {
        System.out.println(receiveMessage);
    }
}
}
}

```

```

Selection      Path                                          Priority  Status
-----
0              /usr/lib/jvm/java-16-openjdk-amd64/bin/java  1611     auto mode
* 1            /opt/jdk/jdk1.8.0_301/bin/java              100      manual mode
2              /usr/lib/jvm/java-11-openjdk-amd64/bin/java  1111     manual mode
3              /usr/lib/jvm/java-16-openjdk-amd64/bin/java  1611     manual mode

Press <enter> to keep the current choice[*], or type selection number: 1
aiktc@aiktc22:~/Desktop/dc-exp-025$ sudo update-alternatives --config javac
There are 2 choices for the alternative javac (providing /usr/bin/javac).

Selection      Path                                          Priority  Status
-----
* 0              /usr/lib/jvm/java-16-openjdk-amd64/bin/javac  1611     auto mode
1              /usr/lib/jvm/java-11-openjdk-amd64/bin/javac  1111     manual mode
2              /usr/lib/jvm/java-16-openjdk-amd64/bin/javac  1611     manual mode

Press <enter> to keep the current choice[*], or type selection number: 1
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/javac to provide /u
aiktc@aiktc22:~/Desktop/dc-exp-025$ sudo update-alternatives --config java
There are 3 choices for the alternative java (providing /usr/bin/java).

Selection      Path                                          Priority  Status
-----
0              /usr/lib/jvm/java-16-openjdk-amd64/bin/java  1611     auto mode
* 1            /opt/jdk/jdk1.8.0_301/bin/java              100      manual mode
2              /usr/lib/jvm/java-11-openjdk-amd64/bin/java  1111     manual mode
3              /usr/lib/jvm/java-16-openjdk-amd64/bin/java  1611     manual mode

Press <enter> to keep the current choice[*], or type selection number: 0
update-alternatives: using /usr/lib/jvm/java-16-openjdk-amd64/bin/java to provide /us
aiktc@aiktc22:~/Desktop/dc-exp-025$ javac ser.java
aiktc@aiktc22:~/Desktop/dc-exp-025$ java ser
Server ready
Operation : add
Parameter 1 : 15
Addition = 30
Operation : mul
Parameter 1 : 67

Multiplication = 3752
Operation : div
Parameter 1 : 64876
Division = 1410

```

Conclusion:

We have successfully performed the experiment on client/server using RPC.