

# EXEC3-RMI

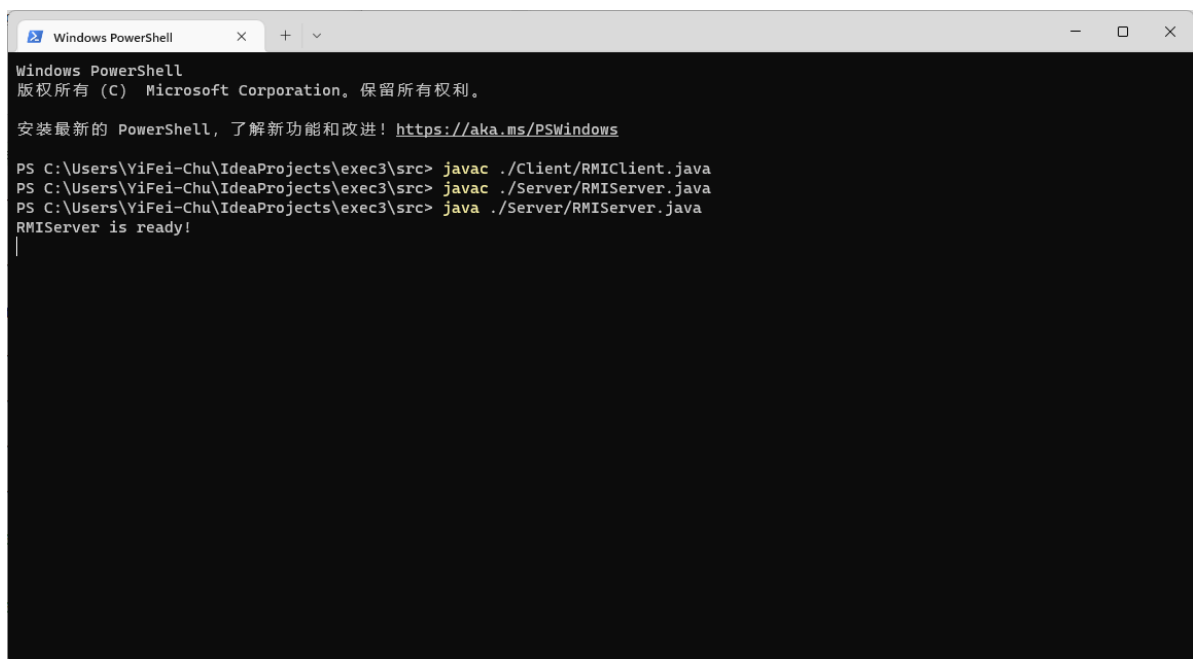
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理解：本次实验中的命令分为两类：

- ①第一类是在启动RMIClient时使用的完整命令，也即exec3说明文档中给出的有详细说明的几种命令，这些命令有三个作用：连接Server、设置当前Client的User(即launchUser)、执行一条命令；
- ②第二类是在启动了Client之后使用的简化版的命令，其中省去了servername、portnumber、username、password四个值，原因是在启动Client时已经由第一类命令设置过连接和当前User

## 1.编译文件并运行RMIServer

---



```
Windows PowerShell
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PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> javac ./Client/RMIClient.java
PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> javac ./Server/RMIServer.java
PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Server/RMIServer.java
RMIServer is ready!
```

## 2.设置两个User CYF和CYF2

```
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PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 register CYF 1234
Successful!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
1.add          arguments:<username> <start> <end> <title>
2.delete       arguments:<meetingid>
3.clear        arguments:no args
4.query        arguments:<start> <end>
5.help         arguments:no args
6.quit         arguments:no args
Input an operation:
|
```

```
Windows PowerShell
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PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 register CYF2 1234
Successful!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
1.add          arguments:<username> <start> <end> <title>
2.delete       arguments:<meetingid>
3.clear        arguments:no args
4.query        arguments:<start> <end>
5.help         arguments:no args
6.quit         arguments:no args
Input an operation:
|
```

## 3.在register的基础上使用简化的add命令和query命令

```
Windows PowerShell
PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 register CVF 1234
Successful!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
1.add
   arguments:<username> <start> <end> <title>
2.delete
   arguments:<meetingid>
3.clear
   arguments:no args
4.query
   arguments:<start> <end>
5.help
   arguments:no args
6.quit
   arguments:no args
Input an operation:
add 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 只有一名用户 不能创建会议!
Input an operation:
add CVF 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 其他成员里不能包括操作者本身!
Input an operation:
add CVF3 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 无效用户!
Input an operation:
add CVF2 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-21:00
Meeting{meetingID=0, title='ThisIsATestMeeting!', startTime=Tue Nov 01 20:00:00 CST 2022, endTime=Tue Nov 01 21:00:00 CST 2022, launchUser=[name: CVF,password:1234], otherUsers=[[name: CVF2,password:1234]]}

Input an operation:
|
```

几种不能创建的情况：没有其他用户不能创建、其他用户中有不存在的用户不能创建、其他用户中包含创建者自身不能创建，如上图所示

## 4.使用add创建（以及使用query时的时间问题）

```
Windows PowerShell
Input an operation:
add CVF2 CVF3 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 无效时间!
Input an operation:
add CVF2 CVF3 2022-11-1-21:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
q
[INFO] 参数错误!
Input an operation:
query 2022-11-1-21:01 2022-11-1-22:00
Meeting{meetingID=1, title='ThisIsATestMeeting!', startTime=Tue Nov 01 21:01:00 CST 2022, endTime=Tue Nov 01 22:00:00 CST 2022, launchUser=[name: CVF,password:1234], otherUsers=[[name: CVF2,password:1234], [name: CVF3,password:1234]]}

Input an operation:
add CVF2 CVF3 2022-13-1-21:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 无效时间!
Input an operation:
add CVF2 CVF3 2022-11-0-21:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 无效时间!
Input an operation:
add CVF2 CVF3 2022-11-0-25:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 无效时间!
Input an operation:
add CVF2 CVF3 2022-11-1-25:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 无效时间!
Input an operation:
add CVF2 CVF3 2022-11-1-23:60 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 无效时间!
Input an operation:
|
```

**add与query命令执行时要检查时间的正确性：月份数字、日期数字、小时以及分钟是否在合理的范围内（分钟不能出现60 小时不能出现24——24时应该表示成0时）同时在这里一个会议的结束时间等于另一个会议的开始时间时，另一个会议不能被创建，此外还判断了会议起止时间不能颠倒等等。**

## 5.delete命令

```
Windows PowerShell
2.delete
  arguments:<meetingid>
3.clear
  arguments:no args
4.query
  arguments:<start> <end>
5.help
  arguments:no args
6.quit
  arguments:no args
Input an operation:
add CYF2 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-21:00
Meeting{meetingID=0, title='ThisIsATestMeeting!', startTime=Tue Nov 01 20:00:00 CST 2022, endTime=Tue Nov 01 21:00:00 CST 2022, launchUser=[name: CYF,password:1234], otherUsers=[[name: CYF2,password:1234]]}

Input an operation:
delete 1
[INFO] 操作失败!
Input an operation:
delete 0
[INFO] 操作成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-21:00

Input an operation:
|
```

## 6.clear命令

```
Windows PowerShell
[INFO] 操作失败!
Input an operation:
delete 0
[INFO] 操作成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-21:00

Input an operation:
add CYF2 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
add CYF2 2022-11-1-21:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-22:00
Meeting{meetingID=1, title='ThisIsATestMeeting!', startTime=Tue Nov 01 20:00:00 CST 2022, endTime=Tue Nov 01 21:00:00 CST 2022, launchUser=[name: CYF,password:1234], otherUsers=[[name: CYF2,password:1234]]}
Meeting{meetingID=2, title='ThisIsATestMeeting!', startTime=Tue Nov 01 21:01:00 CST 2022, endTime=Tue Nov 01 22:00:00 CST 2022, launchUser=[name: CYF,password:1234], otherUsers=[[name: CYF2,password:1234]]}

Input an operation:
clear
[INFO] 操作成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-22:00

Input an operation:
|
```

## 7.help命令

```
Windows PowerShell
1.add      arguments:<username> <start> <end> <title>
2.delete   arguments:<meetingid>
3.clear    arguments:no args
4.query    arguments:<start> <end>
5.help     arguments:no args
6.quit     arguments:no args
Input an operation:
help
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
1.add      arguments:<username> <start> <end> <title>
2.delete   arguments:<meetingid>
3.clear    arguments:no args
4.query    arguments:<start> <end>
5.help     arguments:no args
6.quit     arguments:no args
Input an operation:
|
```

## 8.quit命令

```
Windows PowerShell
Input an operation:
delete 0
[INFO] 操作成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-21:00

Input an operation:
add CYF2 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
add CYF2 2022-11-1-21:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-22:00
Meeting{meetingID=1, title='ThisIsATestMeeting!', startTime=Tue Nov 01 20:00:00 CST 2022, endTime=Tue Nov 01 21:00:00 CST 2022, launchUser=[name: CYF,password:1234], otherUsers=[[name: CYF2,password:1234]]}
Meeting{meetingID=2, title='ThisIsATestMeeting!', startTime=Tue Nov 01 21:01:00 CST 2022, endTime=Tue Nov 01 22:00:00 CST 2022, launchUser=[name: CYF,password:1234], otherUsers=[[name: CYF2,password:1234]]}

Input an operation:
clear
[INFO] 操作成功!
Input an operation:
query 2022-11-1-20:00 2022-11-1-22:00

Input an operation:
quit
PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> |
```

## 9.完整的delete——也即启动时的delete命令

```
PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 delete CYF 1234 0
[INFO] 操作成功!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
  1.add          arguments:<username> <start> <end> <title>
  2.delete       arguments:<meetingid>
  3.clear        arguments:no args
  4.query        arguments:<start> <end>
  5.help         arguments:no args
  6.quit         arguments:no args
Input an operation:
query 2022-11-1-20:00 2022-11-1-22:00
Meeting{meetingID=1, title='ThisIsATesyMeeting!', startTime=Tue Nov 01 21:01:00 CST 2022, endTime=Tue Nov 01 22:00:00 CST 20
22, launchUser=[name: CYF,password:1234],
otherUsers=[[name: CYF2,password:1234]]}

Input an operation:
|
```

## 10.完整的query——也即启动时的query

```
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PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 register CYF 1234
Successful!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
  1.add          arguments:<username> <start> <end> <title>
  2.delete       arguments:<meetingid>
  3.clear        arguments:no args
  4.query        arguments:<start> <end>
  5.help         arguments:no args
  6.quit         arguments:no args
Input an operation:
add CYF2 2022-11-1-20:00 2022-11-1-21:00 ThisIsATesyMeeting!
[INFO] 添加会议成功!
Input an operation:
add CYF2 2022-11-1-21:01 2022-11-1-22:00 ThisIsATesyMeeting!
[INFO] 添加会议成功!
Input an operation:
quit
PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 query CYF 1234 2022-11-1-20:00 202
2-11-1-22:00
Meeting{meetingID=0, title='ThisIsATesyMeeting!', startTime=Tue Nov 01 20:00:00 CST 2022, endTime=Tue Nov 01 21:00:00 CST 20
22, launchUser=[name: CYF,password:1234],
otherUsers=[[name: CYF2,password:1234]]}
Meeting{meetingID=1, title='ThisIsATesyMeeting!', startTime=Tue Nov 01 21:01:00 CST 2022, endTime=Tue Nov 01 22:00:00 CST 20
22, launchUser=[name: CYF,password:1234],
otherUsers=[[name: CYF2,password:1234]]}

[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
  1.add          arguments:<username> <start> <end> <title>
  2.delete       arguments:<meetingid>
  3.clear        arguments:no args
  4.query        arguments:<start> <end>
  5.help         arguments:no args
  6.quit         arguments:no args
Input an operation:
|
```

## 11.完整的clear——也即启动时的clear

```
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PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 register CYF 1234
Successful!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
    1.add
      arguments:<username> <start> <end> <title>
    2.delete
      arguments:<meetingid>
    3.clear
      arguments:no args
    4.query
      arguments:<start> <end>
    5.help
      arguments:no args
    6.quit
      arguments:no args
Input an operation:
add CYF2 2022-11-1-20:00 2022-11-1-21:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
add CYF2 2022-11-1-21:01 2022-11-1-22:00 ThisIsATestMeeting!
[INFO] 添加会议成功!
Input an operation:
query 2022-11-1-21:01 2022-11-1-22:00
Meeting{meetingID=3, title='ThisIsATestMeeting!', startTime=Tue Nov 01 21:01:00 CST 2022, endTime=Tue Nov 01 22:00:00 CST 20
22, launchUser=[name: CYF,password:1234],
otherUsers=[[name: CYF2,password:1234]]}

Input an operation:
query 2022-11-1-20:00 2022-11-1-21:00
Meeting{meetingID=2, title='ThisIsATestMeeting!', startTime=Tue Nov 01 20:00:00 CST 2022, endTime=Tue Nov 01 21:00:00 CST 20
22, launchUser=[name: CYF,password:1234],
otherUsers=[[name: CYF2,password:1234]]}

Input an operation:
quit
quit

PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 clear CYF 1234
[INFO] 操作成功!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
    1.add
      arguments:<username> <start> <end> <title>
    2.delete
      arguments:<meetingid>
    3.clear
      arguments:no args
    4.query
      arguments:<start> <end>
    5.help
      arguments:no args
    6.quit
      arguments:no args
Input an operation:
query 2022-11-1-20:00 2022-11-21:00

Input an operation:
|
```

## 12.完整的add——也即启动时的add

```
Windows PowerShell
arguments:no args
6.quit
arguments:no args
Input an operation:
quit
PS C:\Users\YiFei-Chu\IdeaProjects\exec3\src> java ./Client/RMIClient.java localhost 8000 add CYF 1234 CYF2 2022-11-1-20:00
2022-11-1-21:00 TEST
[INFO] 添加会议成功!
[INFO] 时间格式: yyyy-MM-dd-HH:mm
RMI Menu:
1.add
arguments:<username> <start> <end> <title>
2.delete
arguments:<meetingid>
3.clear
arguments:no args
4.query
arguments:<start> <end>
5.help
arguments:no args
6.quit
arguments:no args
Input an operation:
query 2022-11-1-20:00 2022-11-1-21:00
Meeting{meetingID=0, title='TEST', startTime=Tue Nov 01 20:00:00 CST 2022, endTime=Tue Nov 01 21:00:00 CST 2022, launchUser=
[name: CYF,password:1234],
otherUsers=[[name: CYF2,password:1234]]}
Input an operation:
|
```