

TCC Web Socket Refactoring Deployment Guide

Revision History

Author	Revision Number	Date
gevak	1.0	2014-04-21

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Deployment Instructions

1. Organization of Submission

The submission structure is as follows:

Folder	Description
demo/	Contains the demos to show this application runs correctly.
dev/	Contains changed source codes necessary to implement the functionality.
docs/	Contains documentation.
test_files/	Contains files necessary for testing.

The Git commit hashes are:

Folder	Description
/home/apps/dev/app	184eab20936b6086b62e28f1614478ae0830d98c
/home/apps/dev/libs/compeng-common	f897c4293abab4ff1f235fa8934917f3f8c4517e

2. Application Setup

2.1 Preconditions

- JBoss 4.0.5
- JRE 1.6

3. Configuration

None for this contest.

4. Database Setup

None for this contest.

5. Deployment Instructions

Unless specified otherwise, each operation should be done under "apps" user on VM.

5.1 Apply updates

```
cd /home/apps/dev/app/src/main/com/topcoder/server/listener/wss
rm -rf *
```

Upload {submission}/dev/* to /home/apps/dev, just replace all the modified codes.

5.2 Stop listeners and JBoss

```
cd /home/apps/app/scripts
sh stopMainListener.sh
sh stopWebSocketListener.sh
sh stopAdminListener.sh
rm *.log
jps | grep " Main" | awk '{print -9,$1}' |xargs kill
```

5.3 Deploy compeng-common

```
cd /home/apps/dev/libs/compeng-common
ant clean clean-cache
ant publish-workspace-all
```

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5.4 Deploy app

```
cd /home/apps/dev/app
ant clean clean-cache
ant publish-workspace-all
ant deploy-app deploy-jboss
```

5.5 Build arena client

```
cd /home/apps/dev/comp-eng/arena-client
ant clean
ant publish-workspace-all package-applet
```

Download /home/apps/dev/comp-eng/arena-client/build/arena-client-7.1.0.zip.

Extract the arena-client-7.1.0.zip.

Please note that version can be different. Just use whatever arena-client-*.zip file will be there.

5.6 Build admin client

```
cd /home/apps/dev/app
ant clean
ant publish-workspace-all package-AdminTool
```

Download /home/apps/dev/app/dist/ admin-client-7.1.1.zip

Extract the admin-client-7.1.1.zip.

Please note that version can be different. Just use whatever admin-client-*.zip file will be there.

6. Starting

6.1 Start JBoss

```
jbb
sh start.sh
```

Check whether the jboss is started properly:

```
tn
```

Please don't do the next step until you see the following log:

```
04:57:11,863 INFO [EARDeployer] Init J2EE application: file:/home/apps/jboss-4.0.5.GA/server/default/deploy/security.ear
04:57:12,256 INFO [EjbModule] Deploying PrincipalMgrEJB
04:57:12,261 INFO [EjbModule] Deploying PolicyMgrEJB
04:57:12,272 INFO [EjbModule] Deploying PolicyEJB
04:57:12,276 INFO [EjbModule] Deploying LoginEJB
04:57:12,716 INFO [BaseLocalProxyFactory] Bound EJB LocalHome 'PrincipalMgrEJB' to jndi 'java:/com.topcoder.security.admin.PrincipalMgrLocalHome'
04:57:12,763 INFO [ProxyFactory] Bound EJB Home 'PrincipalMgrEJB' to jndi 'com.topcoder.security.admin.PrincipalMgrRemoteHome'
04:57:12,773 INFO [BaseLocalProxyFactory] Bound EJB LocalHome 'PolicyMgrEJB' to jndi 'java:/com.topcoder.security.admin.PolicyMgrLocalHome'
04:57:12,779 INFO [ProxyFactory] Bound EJB Home 'PolicyMgrEJB' to jndi 'com.topcoder.security.admin.PolicyMgrRemoteHome'
04:57:12,785 INFO [BaseLocalProxyFactory] Bound EJB LocalHome 'PolicyEJB' to jndi 'java:/com.topcoder.security.policy.PolicyLocalHome'
04:57:12,789 INFO [ProxyFactory] Bound EJB Home 'PolicyEJB' to jndi 'com.topcoder.security.policy.PolicyRemoteHome'
04:57:12,833 INFO [BaseLocalProxyFactory] Bound EJB LocalHome 'LoginEJB' to jndi 'java:/com.topcoder.security.login.LoginLocalHome'
04:57:12,838 INFO [ProxyFactory] Bound EJB Home 'LoginEJB' to jndi 'com.topcoder.security.login.LoginRemoteHome'
04:57:12,839 INFO [EJBDeployer] Deployed: file:/home/apps/jboss-4.0.5.GA/server/default/tmp/deploy/tmp65256security.ear-contents/security.jar
04:57:12,857 INFO [EARDeployer] Started J2EE application: file:/home/apps/jboss-4.0.5.GA/server/default/deploy/security.ear
04:57:13,049 INFO [Http1BaseProtocol] Starting Coyote HTTP/1.1 on http-0.0.0.0-8280
04:57:13,428 INFO [ChannelSocket] JK: ajp13 listening on /0.0.0.0:8209
04:57:13,462 INFO [JkMain] Jk running ID=0 time=0/48 config=null
04:57:13,468 INFO [CommonServiceFactory] CommonServiceFactory started
04:57:13,468 INFO [Server] JBoss (MX MicroKernel) [4.0.5.GA (build: CVSTagsBranch_4.0 date=200610162339)] Started in 44s:939ms
04:57:13,756 INFO [LongTesterInvoker] Configuring longestest invoker with id=LongTester-TestSvc
04:57:14,233 INFO [LongTesterInvoker] Configuring longestest invoker with id=LongTester-MPSQAS
04:57:14,242 INFO [LongTesterInvoker] Configuring longestest invoker with id=LongTester-MPSQAS
04:57:14,275 INFO [STDOUTOUT] Client init Data
```

6.2 Start listeners

```
cd /home/apps/app/scripts
sh runMainListener.sh
```

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Check whether the jboss is started properly: press `tail -f server + Tab` key.

Command will look similar to this: `tail -f server-2014-04-13-12-08-20.log`

Please don't do the next step until you see the following log:

```
2014-04-02 04:47:22,099 DEBUG [main, 5008] selector created
2014-04-02 04:47:22,099 INFO [main, 5008] threads started
2014-04-02 04:47:22,099 INFO [main, 5008] starting
2014-04-02 04:47:22,099 DEBUG [main, 5008] selector created
2014-04-02 04:47:22,100 INFO [main, 5008] bound to ip-10-151-87-78/10.151.87.78:5008
2014-04-02 04:47:22,100 DEBUG [main, 5008] registering socket channel
2014-04-02 04:47:22,100 DEBUG [main, Selector14] Selector Wakeup
2014-04-02 04:47:22,100 DEBUG [main, SelectSource] Woke Up
2014-04-02 04:47:22,101 DEBUG [main, SelectableChannel] Before Register SPI
2014-04-02 04:47:22,101 DEBUG [main, SelectableChannel] After Register SPI
2014-04-02 04:47:22,101 DEBUG [main, SelectSource] Registered Key
2014-04-02 04:47:22,101 INFO [main, 5008] server socket created
2014-04-02 04:47:22,101 INFO [main, 5008] threads started
2014-04-02 04:47:22,101 INFO [main, 5008] started
2014-04-02 04:47:22,101 INFO [main, ListenerMain] started
2014-04-02 04:47:22,103 INFO [main, ListenerMain] started web socket connector: true
2014-04-02 04:47:22,159 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Writing o connection 0 object com.topcoder.server.AdminListener.response.ContestServerRe
sponse87244ca
2014-04-02 04:47:22,559 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Object written
2014-04-02 04:47:23,561 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Writing on connection 0 object com.topcoder.server.AdminListener.response.ContestServerRe
sponse823756
2014-04-02 04:47:23,561 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Object written
2014-04-02 04:47:24,563 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Writing on connection 0 object com.topcoder.server.AdminListener.response.ContestServerRe
sponse817f11fb
2014-04-02 04:47:24,563 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Object written
2014-04-02 04:47:25,563 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Writing on connection 0 object com.topcoder.server.AdminListener.response.ContestServerRe
sponse8175ade6
2014-04-02 04:47:25,564 DEBUG [listener.ResponseHandler.5002, ResponseWriter.] Object written
```

```
sh runAdminListener.sh
sh runWebSocketListener.sh
```

7. Verification

Unless specified otherwise, password for each competition engine user is "password".

7.1 Prepare your hosts

Before verification, please set your host with (use IP address of your VM):

54.237.135.251 tc.cloud.topcoder.com

Generally, if Linux /etc/hosts, if Windows C:\Windows\System32\drivers\etc\hosts.

7.2 Prepare your browser

Open {submission}/demo/index.html in your browser. If you run into the following screens:

Demo Client - TopCoder Con

11:15:53 undefined: undefined

Please visit <https://tc.cloud.topcoder.com:5037> in your browser first and accept its SSL.

7.3 Run SRM

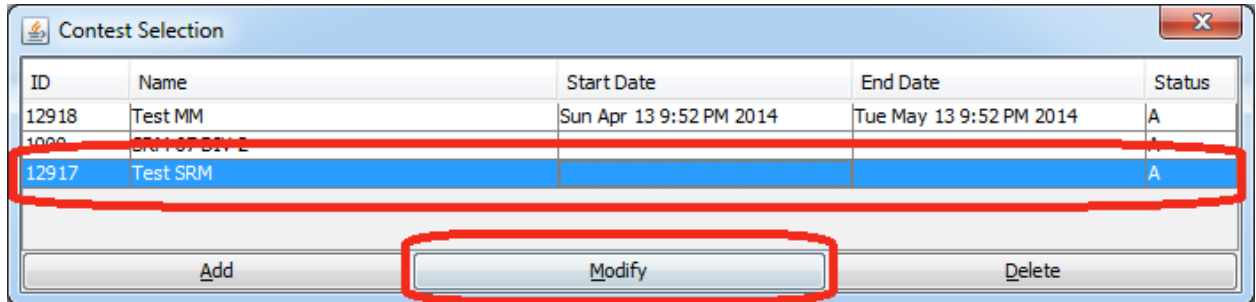
Run admin client.

Login as heffan.

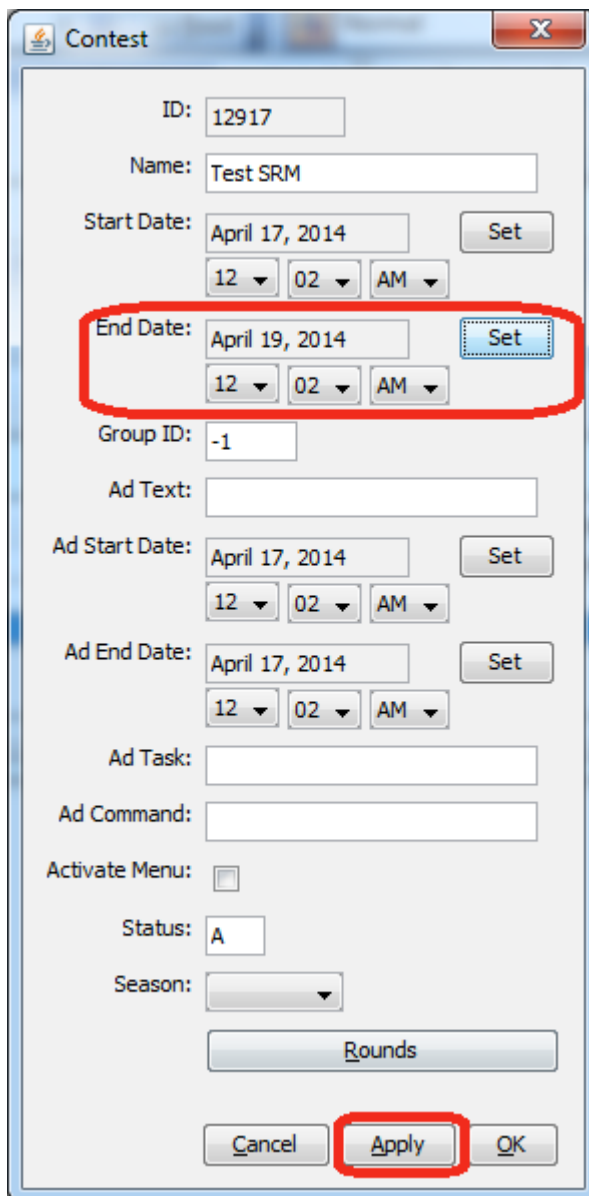
Go to Actions -> Contest Management....

Select Test SRM and click Modify:

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Set End Date to 2 days in future and click Apply:



Click Rounds, select the only round there and click Modify.

Resize window to make it pretty.

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Click Segments.

Set registration and coding phase timings as convenient for you. Please make a gap (at least 1 minute) between end of registration and start of coding, otherwise there could be a bug with room assignment. Click OK to apply changes.

Round Segments

Registration Start: April 17, 2014 Set

12 07 PM

Registration Length: 2

Registration Status: F

Coding Start: April 17, 2014 Set

10 10 PM

Coding Length: 600

Coding Status: F

Intermission Length: 0

Intermission Status: F

Challenge Length: 5

Challenge Status: F

System Status: F

Cancel OK

Load round access and then load round.

Don't close admin client.

Run arena client.

Login as Hung.

Go to Active Contests -> Test SRM - Test SRM Round. Click Register, accept terms, click OK.

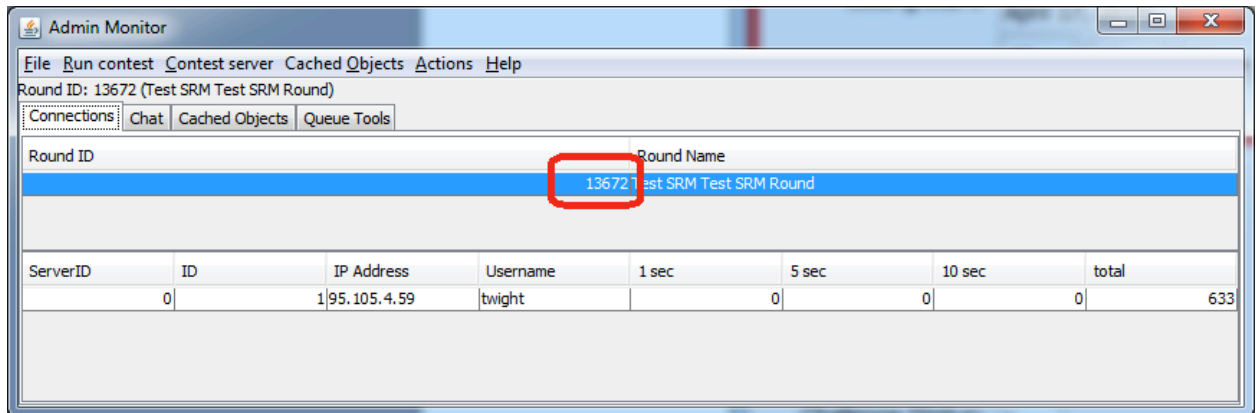
Wait until rooms will be assigned, now you can Enter your room.

Close arena client.

In admin client, click Run Contest -> Refresh Round in order to make contest active.

Remember the round ID:

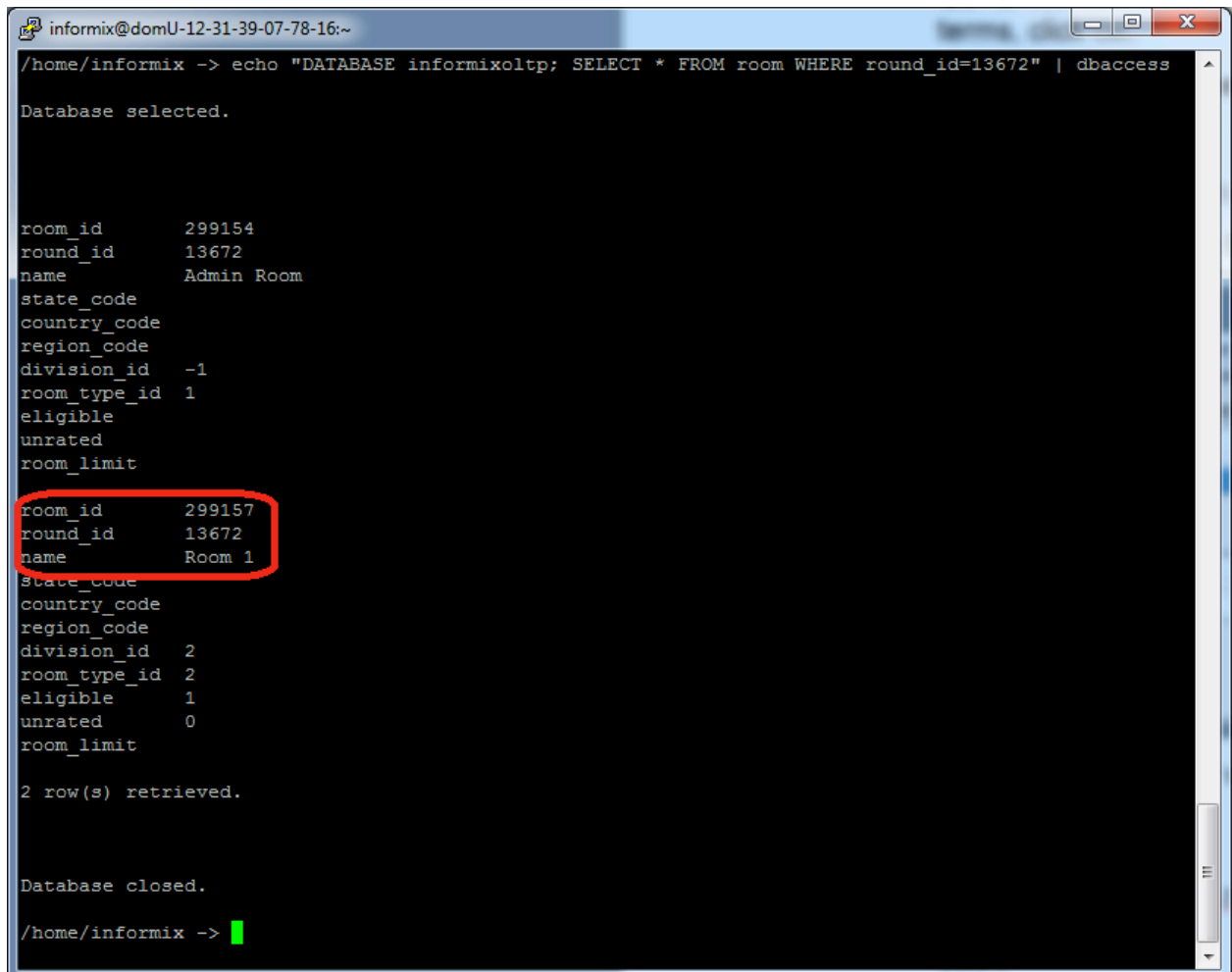
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Retrieve your room ID via SQL (use correct round ID) via running these commands on VM:

```
su -l informix
lnf0rmlx
echo "DATABASE informixoltp; SELECT * FROM room WHERE round_id=13672" |
dbaccess
exit
```

Remember your room ID.



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7.4 Login

In the demo, login as Hung:

Demo Client - TopCoder Competition Engine - Web Socket Listener

```
23:50:38 Received EndSyncResponse:
{"requestId":9}
23:50:38 Received KeepAliveInitializationDataResponse:
{"timeout":45000,"httpTimeout":30000}
23:50:38 Received SynchTimeResponse:
{"time":1398102634900}
23:50:38 Received CreateMenuResponse:
{"type":3,"names":["Admin Lobby Room","Chat Room 1","Chat Room 2"],"statii":["A","A","A"],"ids":[0,11,12]}
23:50:38 Received CreateMenuResponse:
{"type":4,"names":[],"statii":[],"ids":[]}
23:50:38 Received CreateCategoryListResponse:
{"categories":[{"categoryID":1,"categoryName":"Tournaments"},{"categoryID":2,"categoryName":"SRMs"},{"categoryID":3,"categoryName":"TCHS"},{"categoryID":4,"categoryName"}
23:50:38 Received CreateRoundListResponse:
{"type":1,"roundData":[]}
23:50:38 Received CreateRoundListResponse:
{"type":2,"roundData":[]}
23:50:38 Received UserInfoResponse:
{"userInfo":{"team":"","captain":false,"rating":0,"numRatedEvents":0,"admin":false,"lastLogin":1398102109000,"guest":false,"handle":"Hung","preferences":{"0":1},"weakestLinkParti
23:50:38 Received StartSyncResponse:
{"requestId":9}
23:50:35 Client has connected to the server!
```

User Password

7.5 Enter room

Enter your room ID, and click Move:

Demo Client - TopCoder Competition Engine - Web Socket Listener

```
23:39:14 Received UpdateChatResponse:
{"roomType":2,"roomId":299197,"type":1,"data":{"System> Hung has entered the room.\n","rating":0,"scope":1}}
23:39:14 Received UpdateUserListResponse:
{"roomType":2,"roomId":299197,"type":0,"action":0,"userListItem":{"userName":"Hung","userRating":0,"teamName":"","userId":-1,"userType":1,"countryName":""}}
23:39:14 Received EndSyncResponse:
{"requestId":11}
23:39:14 Received SynchTimeResponse:
{"time":1398101950800}
23:39:14 Received CreateUserListResponse:
{"roomType":2,"roomId":299197,"type":0,"teams":[{}],"names":["Hung"],"userListItems":[{"userName":"Hung","userRating":0,"teamName":"","userId":-1,"userType":1,"countryName":""}]}
23:39:14 Received RoomInfoResponse:
{"roundID":13704,"roomType":2,"roomId":299197,"name":"Room 1","status":"yyyy - y Room 1"}
23:39:14 Received CreateChallengeTableResponse:
{"roomType":2,"roomId":299197,"coders":[{"userName":"Hung","userRating":0,"teamName":"","userId":-1,"userType":1,"countryName":"","components":[{"componentID":2021,
23:39:13 Received StartSyncResponse:
{"requestId":11}
23:39:04 Received UpdateChatResponse:
{"roomType":-1,"roomId":-1,"type":1,"data":"Room assignments are completed for yyyy - y. You may move to your room anytime by selecting the contest from the Active Cont
23:39:04 Received CreateLeaderBoardResponse:
{"roundID":13704,"items":[{"roomId":299197,"userName":"Hung","userRating":0,"seed":1,"points":0,"closeRace":false}]}
23:39:04 Received EnableRoundResponse:
{"roundID":13704}
23:39:04 Received CreateRoomListResponse:
```

User Password Login Logout View Active Users

User Handle Get Coder Info

Room ID: Move

7.6 Open problem

Enter 2021 as component ID and click Open:

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Demo Client - TopCoder Competition Engine - Web Socket Listener

[illegible]

7.7 Compile solution

Select `Java` `language`, `paste` `solution` `code` `from` `{submission}/test` `files/solution.java` and click `Compile`:

Demo Client - TopCoder Competition Engine - Web Socket List

[illegible]

Login

Logout

View Active Users

Room ID:

Component ID:

Open

Solution language:

▼

Solution:

```
public class TestProblem {  
    public int sum(int A, int B) {  
        return A+B;  
    }  
}
```

Compile

7.8 Test solution

Enter test arguments like 17, 34 and click Test:

Demo Client - TopCoder Competition Engine - Web Socket Listener

```

23:51:37 Received PopUpGenericResponse:
{"title":"Test Results","type1":2,"type2":0,"message":"Execution Time: 0.020s\n\nReturn Value:\n51\n\nStandard Output:\n\n\n\nStandard Error:\n\n\n"}
23:51:35 Received UpdateChatResponse:
{"roomType":-1,"roomId":-1,"type":1,"data":{"System> Hung is testing the 250-point problem.\n"},"rating":0,"scope":1}
23:51:34 Received TestInfoResponse:
{"dataTypes":[{"typeMapping":{"1":"int","3":"int","4":"int","5":"Integer","6":"integer","7":"int"},"id":1,"description":"int","baseName":"int","dimension":0}],{"typeMapping":
23:51:33 Received PopUpGenericResponse:
{"title":"Compile Result","type1":2,"type2":1,"message":"Your code compiled successfully."}
23:51:31 Received UpdateChatResponse:
{"roomType":-1,"roomId":-1,"type":1,"data":{"System> Hung is compiling the 250-point problem.\n"},"rating":0,"scope":1}
23:51:30 Received OpenComponentResponse:
{"roomType":2,"roomId":299197,"componentID":2021,"code":"public class TestProblem {\n public int sum(int A, int B) { \t\t\t return A+B;\n }\n }","editable":1001,"lang
23:51:30 Received GetProblemResponse:
{"roundID":13704,"divisionID":2,"problem":{"problemComponents":[{"unsafe":false,"valid":true,"messages":[],"intro":{"name":"intro","attributes":{"escaped":"1"},"children
["compileTimeLimit":30000,"gccBuildCommand":"","pythonCommand":"","cppApprovedPath":"","pythonApprovedPath":"","executionTimeLimit":2000,"memLimit":256
["1":"int","3":"int","4":"int","5":"Integer","6":"integer","7":"int"},"id":1,"description":"int","baseName":"int","dimension":0]},{"paramNames":["A","B"],"exposedParamTyp
["escapedText":true,"editableText":"A"],"text":"A"}, {"escapedText":true,"editableText":" and "}, {"name":"b","attributes":{"escapedText":true,"editableText
["name":"annotation","attributes":{"escaped":"1"},"children":["text":"","example":true,"systemTest":false,"id":33121326],"input":["3","4"],"output":["7"],"annotation":{
[], "text":"","example":true,"systemTest":false,"id":33121328},"componentTypeID":1,"componentID":2021,"problemId":10195,"defaultSolution":"","webServices":[],"ro
iteration","checked":false,"id":5},{ "name":"Search","checked":false,"id":6},{ "name":"Simulation","checked":false,"id":7},{ "name":"String Manipulation","checked":false
["name":"Sorting","checked":false,"id":14},{ "name":"Encryption/Compression","checked":false,"id":15},{ "name":"Greedy","checked":false,"id":16}],"codeLengthLimit
["1":"int","3":"int","4":"int","5":"Integer","6":"integer","7":"int"},"id":1,"description":"int","baseName":"int","dimension":0},"executionTimeLimit":2000,"gccBuildCommam
["sum"],"allParamTypes":[{"typeMapping":{"1":"int","3":"int","4":"int","5":"Integer","6":"integer","7":"int"},"id":1,"description":"int","baseName":"int","dimension":0}],{"t
```

User Password

Room ID:

Component ID:

Open

Solution language:

Solution:

```
public class TestProblem {  
    public int sum(int A, int B) {  
        return A+B;  
    }  
}
```

Compile

Get Test Info

Testing argument values:
17, 34

Test

7.10 Play with practice problem

First, you must login with user "twight/password"

1. Find the practice room id, for example 299157, click **Move**

Or you can choose one of practice room in the list, and click "Enter Practice Room"

Room ID:

Practice Room List:

The result is:

```
14:17:35 Received UpdateChatResponse:
{"roomType":4,"roomId":299157,"type":1,"data":{"System> twilight has entered the room.\n"},"rating":0,"scope":1}
14:17:35 Received UpdateUserListResponse:
{"roomType":4,"roomId":299157,"type":0,"action":0,"userListItem":{"userName":"twilight","userRating":0,"teamName":"","userId":-1,"userType":1,"countryName":""}}
```

2. Input component ID, for example 2021, click Open

[illegible]

3. Please do as 7.7, 7.8, 7.9 to compile, test and submit

4. Click “Practice System Test” button, we can see the result:

Testing argument values:

Comma separated, strings in quotes, arrays in square brackets

Test Practice System Test

```

14:23:07 Received PracticeSystemTestResultResponse:
{"resultData":{"roundId":"13674","roomId":"299157","componentId":"2021","testCaseIndex":5,"succeeded":true,"args":[11,12],"expectedValue":23,"returnValue":23,"execTime":36,"maxMemoryUsed":7343}}
14:23:06 Received PracticeSystemTestResultResponse:
{"resultData":{"roundId":"13674","roomId":"299157","componentId":"2021","testCaseIndex":4,"succeeded":true,"args":[9,10],"expectedValue":19,"returnValue":19,"execTime":9,"maxMemoryUsed":7343}}
14:23:06 Received PracticeSystemTestResultResponse:
{"resultData":{"roundId":"13674","roomId":"299157","componentId":"2021","testCaseIndex":3,"succeeded":true,"args":[7,8],"expectedValue":15,"returnValue":15,"execTime":33,"maxMemoryUsed":7343}}
14:23:06 Received PracticeSystemTestResultResponse:
{"resultData":{"roundId":"13674","roomId":"299157","componentId":"2021","testCaseIndex":2,"succeeded":true,"args":[5,6],"expectedValue":11,"returnValue":11,"execTime":59,"maxMemoryUsed":7343}}
14:23:05 Received PracticeSystemTestResultResponse:
{"resultData":{"roundId":"13674","roomId":"299157","componentId":"2021","testCaseIndex":1,"succeeded":true,"args":[3,4],"expectedValue":7,"returnValue":7,"execTime":63,"maxMemoryUsed":7343}}
14:23:05 Received PracticeSystemTestResultResponse:
{"resultData":{"roundId":"13674","roomId":"299157","componentId":"2021","testCaseIndex":0,"succeeded":true,"args":[1,2],"expectedValue":3,"returnValue":3,"execTime":36,"maxMemoryUsed":7343}}

```

8. Resource Contact List

Name	Resource Email
gevak	agevak@gmail.com