

1.Process followed to perform Option 1

A.Followed the <https://www.youtube.com/watch?v=od6fNiegu-Q> link as per the tutorial slides.

B.Open Command Prompt from the bin folder and performed below commands

```
wsgen -verbose -cp . Servers.AsianGameServer -wsdl
```

```
wsgen -verbose -cp . Servers.EuropeanGameServer -wsdl
```

```
wsgen -verbose -cp . Servers.NorthAmericanGameServer -wsdl
```

C.Open Command Prompt from the src folder and performed below commands

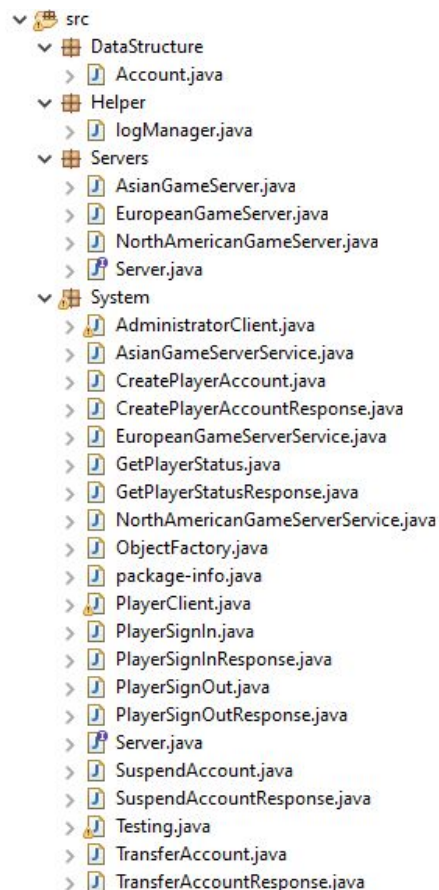
```
wsimport -keep -d . -p System http://localhost:9003/Asian?wsdl
```

```
wsimport -keep -d . -p System http://localhost:9002/European?wsdl
```

```
wsimport -keep -d . -p System http://localhost:9004/NorthAmerican?wsdl
```

Caution:The assignment should be performed in this java version
java version "1.8.0_251" and make sure that ports are not busy before testing.

Description of the files in the Folder



System Package contains the

1. AdministratorClient console for the admins.
2. PlayerClient console for the players.
3. Testing console for testing the application.
4. Other files are system generated files.

Servers Package contains the

1. NorthAmericanGameServer deals with these 132.xxx.xxx.xxx IP'S.
2. EuropeanGameServer deals with these 93.xxx.xxx.xxx IP'S
3. AsianGameServer deals with these 182.xxx.xxx.xxx IP'S.

Helper Package contains the

logManager deals with the logging.

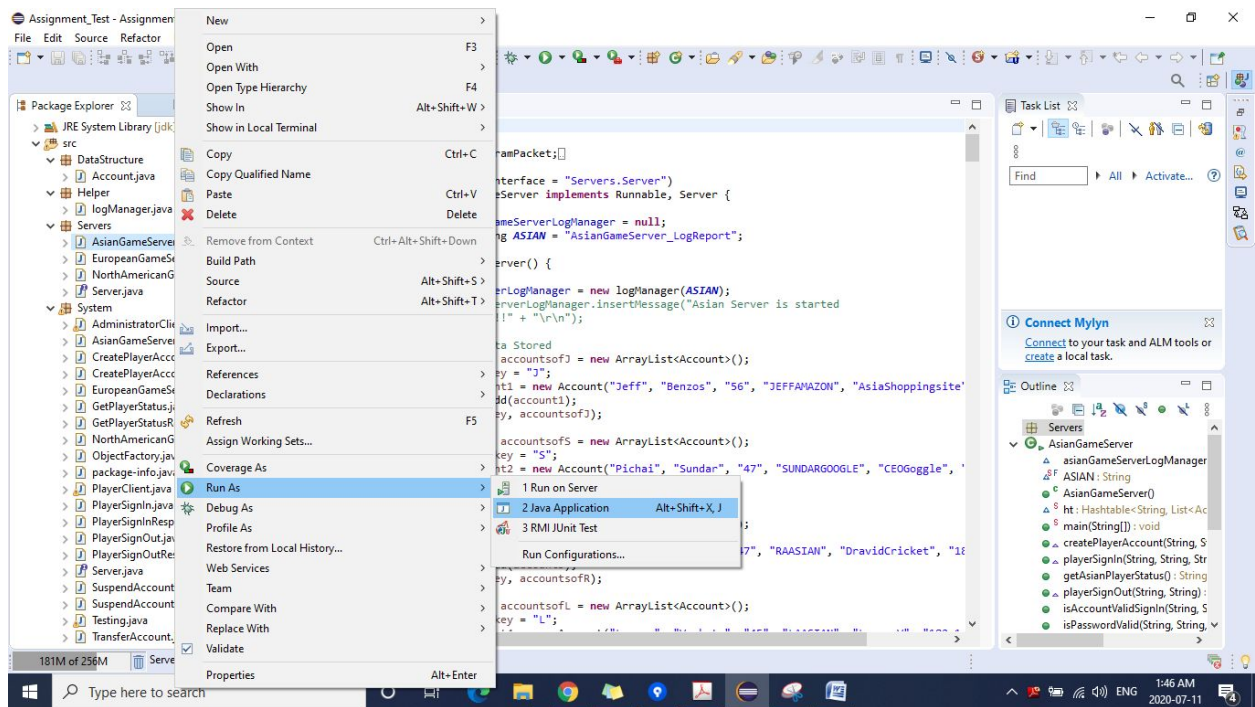
DataStructure Package contains the

Account holds the blueprint of the structure.

2.Set up the project

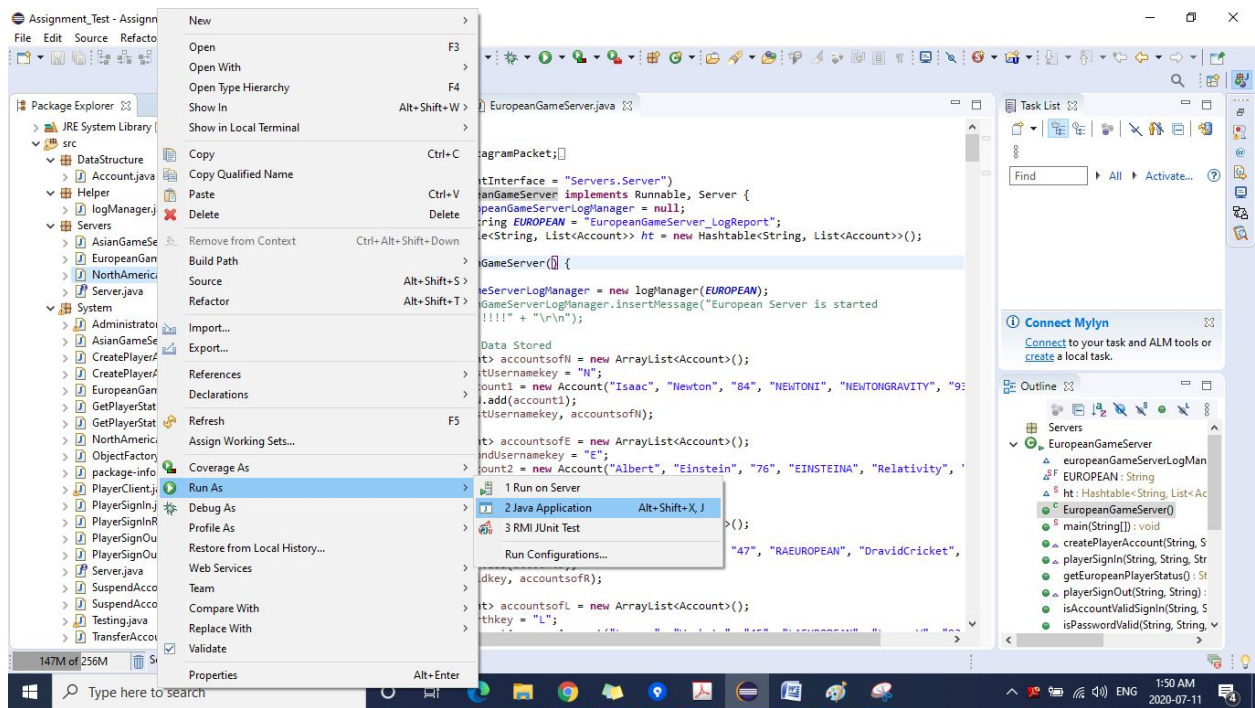
Please follow below steps:.

A)Run AsianGameServer as below



```
AsianGameServer [Java Application] C:\Program Files\Java\jdk\
Asian Game Server is Started !!!!
UDP Port for Asian Game Server Started
Asian Server published successfully
Asian Server Active ...
```

B)Run NorthAmericanGameServer as below



NorthAmericanGameServer [Java Application] C:\Program Files\Java\jdk\bin
North American Game Server is Started !!!!
UDP Port for NorthAmerican Game Server Started
North American Server published successfully
North American Server Active ...

The screenshot displays an IDE environment with the following components:

- Package Explorer:** Shows a project structure with packages like `src`, `AsianGameSe`, `EuropeanGam`, `NorthAmerica`, `Server.java`, and `System`.
- Code Editor:** Displays the implementation of `EuropeanGameServer.java`. The code includes a `GameServer` interface and a `EuropeanGameServer` class that implements it. The class uses a `HashMap` to store game data and a `Logger` to log messages. The code is as follows:


```

      packagePacket;

      import java.util.*;
      import java.util.logging.*;

      public class EuropeanGameServer implements Runnable {
          private static Logger logManager = null;
          private static EuropeanGameServer logReport;
          private static HashMap<String, List<Account>> ht = new HashMap<String, List<Account>>();

          public EuropeanGameServer() {
              logManager = new Logger(EUROPEAN);
              logManager.addHandler(new LogHandler(EUROPEAN));
              logManager.insertMessage("European Server is started");
          }

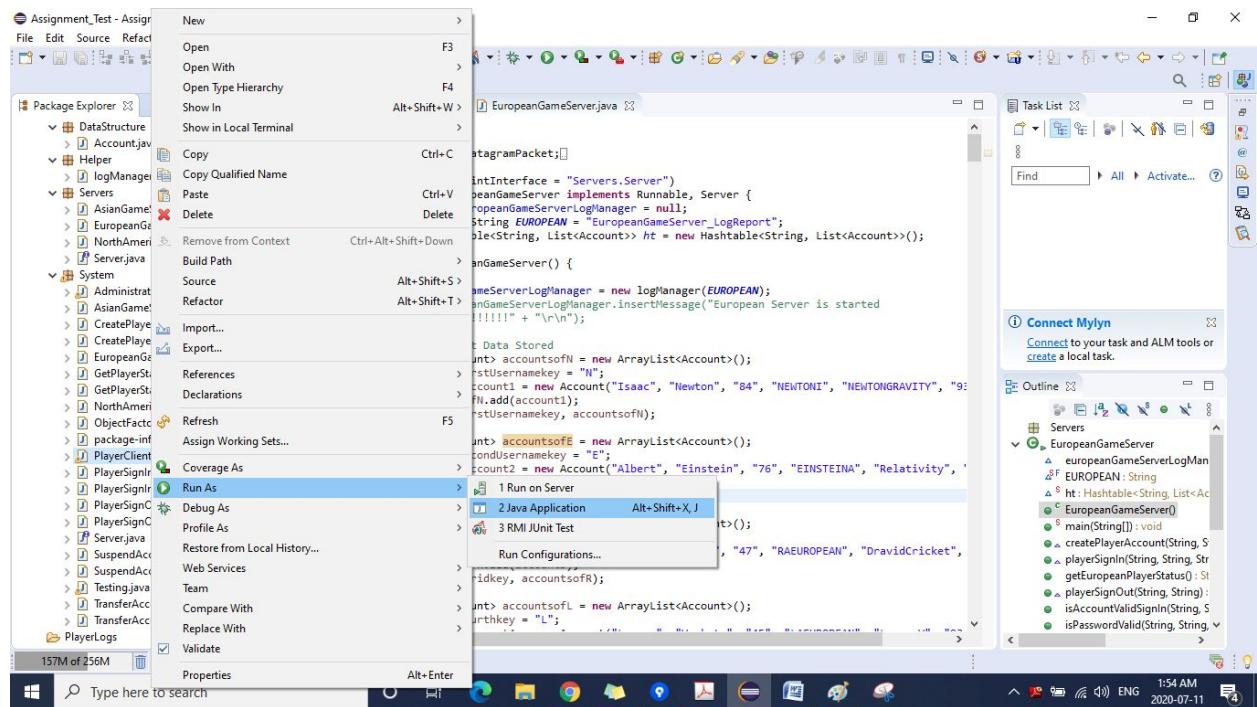
          public void run() {
              Data Stored
              List<Account> accountsofN = new ArrayList<Account>();
              Account tUsernamekey = "N";
              Account tPunt1 = new Account("Isaac", "Newton", "84", "NEWTONI", "NEWTONGRAVITY", "9");
              accountsofN.add(tUsernamekey, accountsofN);

              List<Account> accountsofE = new ArrayList<Account>();
              Account tUsernamekey = "E";
              Account tPunt2 = new Account("Albert", "Einstein", "76", "EINSTEINA", "RELATIVITY", "9");
              accountsofE.add(tUsernamekey, accountsofE);

              List<Account> accountsofL = new ArrayList<Account>();
              Account tUsernamekey = "L";
              Account tPunt3 = new Account("David", "Cricket", "47", "RAEUROPEAN", "DAVIDCRICKET", "9");
              accountsofL.add(tUsernamekey, accountsofL);
          }
      }
      
```
- Task List:** Shows a task titled "Connect Mylyn" with a description: "Connect to your task and ALM tools or create a local task."
- Outline:** Shows the project structure, including the `EuropeanGameServer` class and its methods.
- Run Configurations:** A dialog box is open, showing the configuration for running the application. The configuration is set to "Run on Server" and "Java Application".

```
EuropeanGameServer [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe
European Game Server is Started !!!!
UDP Port for European Game Server Started
European Server published successfully
European Server Active ...
```


D.Run PlayerClient as below

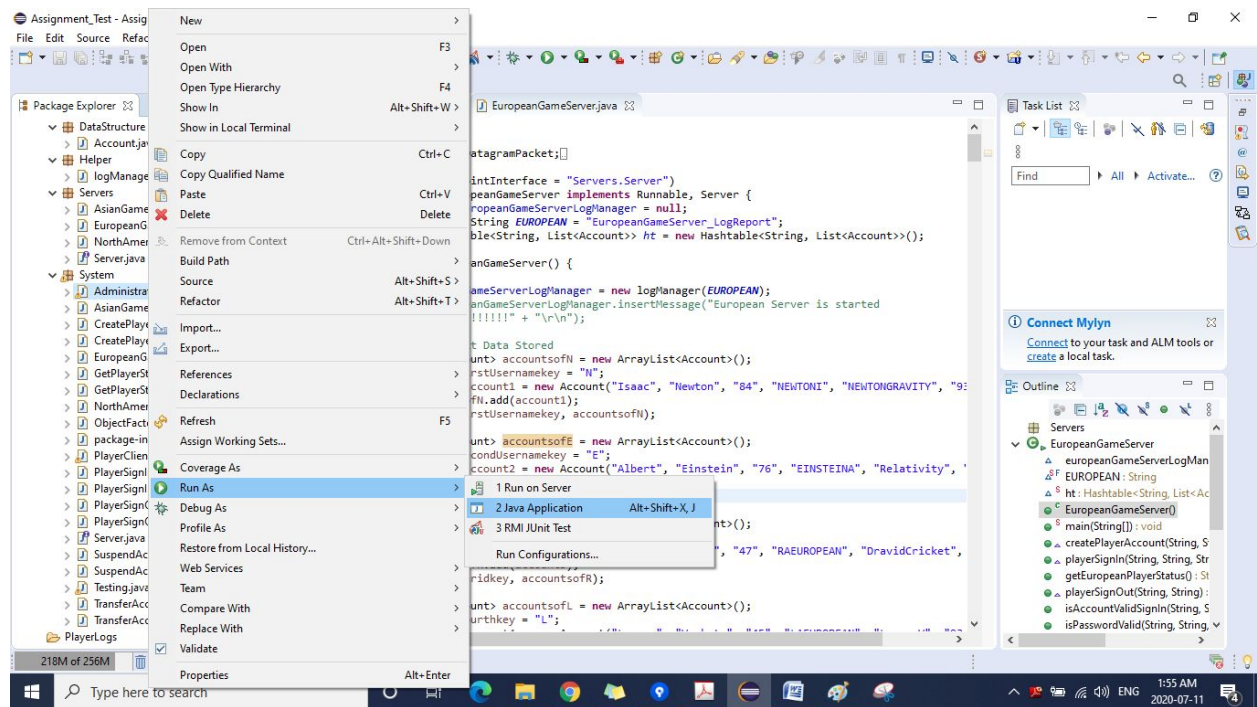


PlayerClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2

Please Select the one of the below options

- 1.Create Player Account
- 2.Player SignIn
- 3.Player SignOut
- 4.Transfer the Account
- 5.Close the Player Client Application

E.Run AdministratorClient as below



AdministratorClient [Java Application] C:\Program Files\Java\jdk\bin\j;

Please Select the one of the below options

- 1.Get Admin Status
- 2.Suspend Account
- 3.Close the Admin Client Application

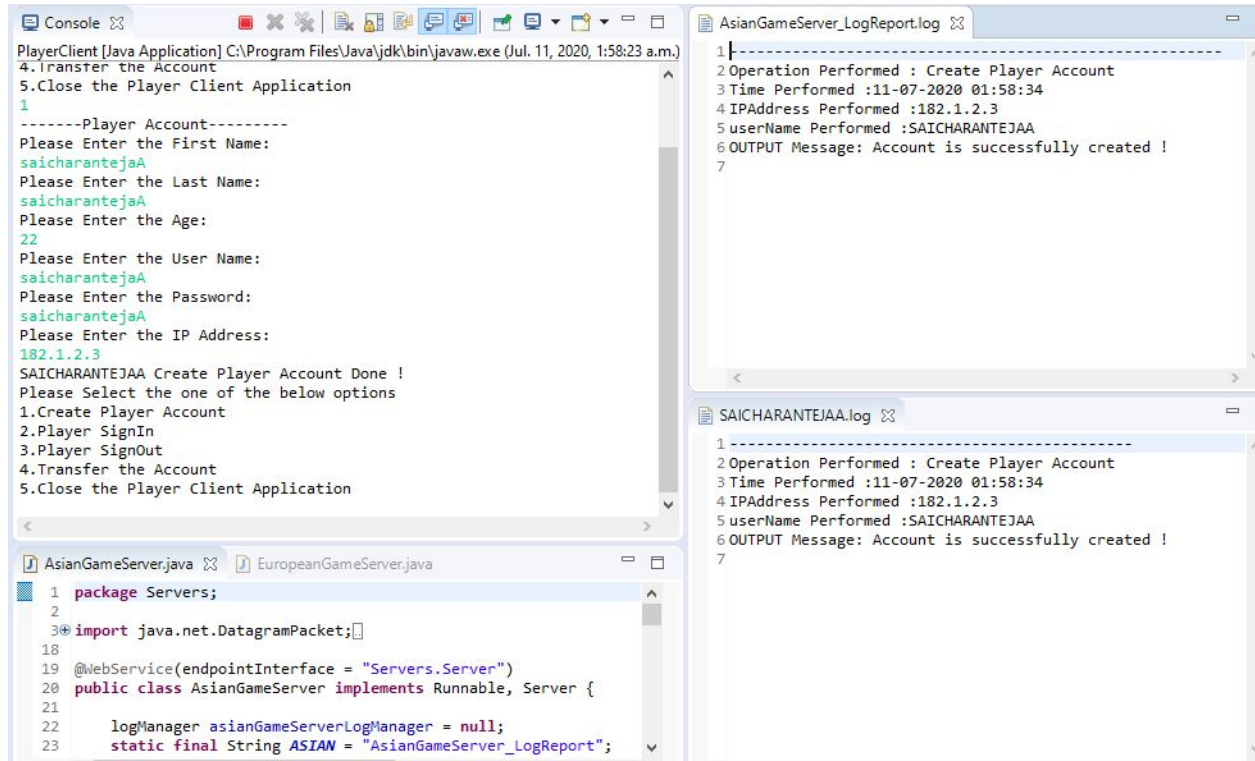
4. Testing

All the docs are in TestCases_Proofs

Screenshots in TestCases_Proof.pdf

Logs of player in PlayerLogs folder

5.Manual Testing for player



```
PlayerClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2020, 1:58:23 a.m.)
4.Transfer the Account
5.Close the Player Client Application
1
-----Player Account-----
Please Enter the First Name:
saicharantejaA
Please Enter the Last Name:
saicharantejaA
Please Enter the Age:
22
Please Enter the User Name:
saicharantejaA
Please Enter the Password:
saicharantejaA
Please Enter the IP Address:
182.1.2.3
SAICHARANTEJAA Create Player Account Done !
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
```

```
1-----
2Operation Performed : Create Player Account
3Time Performed :11-07-2020 01:58:34
4IPAddress Performed :182.1.2.3
5userName Performed :SAICHARANTEJAA
6OUTPUT Message: Account is successfully created !
7
```

```
1-----
2Operation Performed : Create Player Account
3Time Performed :11-07-2020 01:58:34
4IPAddress Performed :182.1.2.3
5userName Performed :SAICHARANTEJAA
6OUTPUT Message: Account is successfully created !
7
```

```
1 package Servers;
2
3 import java.net.DatagramPacket;
18
19 @WebService(endpointInterface = "Servers.Server")
20 public class AsianGameServer implements Runnable, Server {
21
22     LogManager asianGameServerLogManager = null;
23     static final String ASIAN = "AsianGameServer_LogReport";
```

Console

PlayerClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2020, 1:58:23 a.m.)
182.1.2.3
SAICHARANTEJAA Create Player Account Done !
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
2
Please Enter the User Name:
saicharantejaa
Please Enter the Password:
saicharantejaa
Please Enter the IP Address:
182.1.2.3
SAICHARANTEJAA Player successfully Signed In
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application

AsianGameServer.javaEuropeanGameServer.java
1 package Servers;
2
3 import java.net.DatagramPacket;
18
19 @WebService(endpointInterface = "Servers.Server")
20 public class AsianGameServer implements Runnable, Server {
21
22 logManager asianGameServerLogManager = null;
23 static final String ASIAN = "AsianGameServer_LogReport";

AsianGameServer_LogReport.log
1 -----
2 Operation Performed : Create Player Account
3 Time Performed :11-07-2020 01:58:34
4 IPAddress Performed :182.1.2.3
5 userName Performed :SAICHARANTEJAA
6 OUTPUT Message: Account is successfully created !
7 -----
8 Operation Performed : Player Sign In
9 Time Performed :11-07-2020 02:00:26
10 IPAddress Performed :182.1.2.3
11 userName Performed :SAICHARANTEJAA
12 OUTPUT Message: Player successfully Signed In
13

SAICHARANTEJAA.log
1 -----
2 Operation Performed : Create Player Account
3 Time Performed :11-07-2020 01:58:34
4 IPAddress Performed :182.1.2.3
5 userName Performed :SAICHARANTEJAA
6 OUTPUT Message: Account is successfully created !
7 -----
8 Operation Performed : Player Sign In
9 Time Performed :11-07-2020 02:00:26
10 IPAddress Performed :182.1.2.3
11 userName Performed :SAICHARANTEJAA
12 OUTPUT Message: Player successfully Signed In
13

Console

PlayerClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2020, 1:58:23 a.m.)
saicharantejaa
Please Enter the IP Address:
182.1.2.3
SAICHARANTEJAA Player successfully Signed In
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
3
Please Enter the User Name:
saicharantejaa
Please Enter the IP Address:
182.1.2.3
SAICHARANTEJAA Player successfully Signed Out
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application

AsianGameServer.javaEuropeanGameServer.java
1 package Servers;
2
3 import java.net.DatagramPacket;
18
19 @WebService(endpointInterface = "Servers.Server")
20 public class AsianGameServer implements Runnable, Server {
21
22 logManager asianGameServerLogManager = null;
23 static final String ASIAN = "AsianGameServer_LogReport";

AsianGameServer_LogReport.log
3 Time Performed :11-07-2020 01:58:34
4 IPAddress Performed :182.1.2.3
5 userName Performed :SAICHARANTEJAA
6 OUTPUT Message: Account is successfully created !
7 -----
8 Operation Performed : Player Sign In
9 Time Performed :11-07-2020 02:00:26
10 IPAddress Performed :182.1.2.3
11 userName Performed :SAICHARANTEJAA
12 OUTPUT Message: Player successfully Signed In
13 -----
14 Operation Performed : Player Sign Out
15 Time Performed :11-07-2020 02:01:40
16 IPAddress Performed :182.1.2.3
17 userName Performed :SAICHARANTEJAA
18 OUTPUT Message: Player successfully Signed Out
19

SAICHARANTEJAA.log
3 Time Performed :11-07-2020 01:58:34
4 IPAddress Performed :182.1.2.3
5 userName Performed :SAICHARANTEJAA
6 OUTPUT Message: Account is successfully created !
7 -----
8 Operation Performed : Player Sign In
9 Time Performed :11-07-2020 02:00:26
10 IPAddress Performed :182.1.2.3
11 userName Performed :SAICHARANTEJAA
12 OUTPUT Message: Player successfully Signed In
13 -----
14 Operation Performed : Player Sign Out
15 Time Performed :11-07-2020 02:01:40
16 IPAddress Performed :182.1.2.3
17 userName Performed :SAICHARANTEJAA
18 OUTPUT Message: Player successfully Signed Out
19

The screenshot shows an IDE with three main panels. The left panel is the 'Console' window, displaying the output of a Java application. The middle panel shows the source code of 'AsianGameServer.java'. The right panel displays two log files: 'AsianGameServer_LogReport.log' and 'SAICHARANTEJAA.log'.

Console Output:

```
PlayerClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2020, 1:58:23)
SAICHARANTEJAA Player successfully Signed Out
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
4
Please Enter the User Name:
saicharantejaA
Please Enter the Password:
saicharantejaA
Please Enter the IP Address:
182.1.2.3
Please Enter the new IP Address:
93.1.2.3
Transfer Account Done !
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
```

AsianGameServer.java:

```
1 package Servers;
2
3 import java.net.DatagramPacket;
4
18 @WebService(endpointInterface = "Servers.Server")
19 public class AsianGameServer implements Runnable, Server {
20     logManager asianGameServerLogManager = null;
21     static final String ASIAN = "AsianGameServer_LogReport";
```

AsianGameServer_LogReport.log:

```
9 Time Performed :11-07-2020 02:00:26
10 IPAddress Performed :182.1.2.3
11 userName Performed :SAICHARANTEJAA
12 OUTPUT Message: Player successfully Signed In
13 -----
14 Operation Performed : Player Sign Out
15 Time Performed :11-07-2020 02:01:40
16 IPAddress Performed :182.1.2.3
17 userName Performed :SAICHARANTEJAA
18 OUTPUT Message: Player successfully Signed Out
19 -----
20 Operation Performed : Transfer Account
21 Time Performed :11-07-2020 02:03:03
22 IPAddress Performed :182.1.2.3
23 userName Performed :SAICHARANTEJAA
24 OUTPUT Message: Transfer Account is successfully !
25
```

SAICHARANTEJAA.log:

```
9 Time Performed :11-07-2020 02:00:26
10 IPAddress Performed :182.1.2.3
11 userName Performed :SAICHARANTEJAA
12 OUTPUT Message: Player successfully Signed In
13 -----
14 Operation Performed : Player Sign Out
15 Time Performed :11-07-2020 02:01:40
16 IPAddress Performed :182.1.2.3
17 userName Performed :SAICHARANTEJAA
18 OUTPUT Message: Player successfully Signed Out
19 -----
20 Operation Performed : Transfer Player Account
21 Time Performed :11-07-2020 02:03:03
22 IPAddress Performed :182.1.2.3
23 userName Performed :SAICHARANTEJAA
24 OUTPUT Message: Transfer Account is successfully created !
25
```

Check transfer account in new Ip Address

This screenshot shows the same IDE environment as the previous one, but with the application running further. The 'Console' window now shows the user selecting option 4 (Transfer the Account) and entering a new IP address (93.1.2.3). The log files show the successful completion of the account transfer process.

Console Output:

```
PlayerClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
4
Please Enter the User Name:
saicharantejaA
Please Enter the Password:
saicharantejaA
Please Enter the IP Address:
182.1.2.3
Please Enter the new IP Address:
93.1.2.3
Transfer Account Done !
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
2
Please Enter the User Name:
saicharantejaA
Please Enter the Password:
saicharantejaA
Please Enter the IP Address:
93.1.2.3
SAICHARANTEJAA Player successfully Signed In
Please Select the one of the below options
1.Create Player Account
2.Player SignIn
3.Player SignOut
4.Transfer the Account
5.Close the Player Client Application
```

SAICHARANTEJAA.log:

```
15 Time Performed :11-07-2020 02:01:40
16 IPAddress Performed :182.1.2.3
17 userName Performed :SAICHARANTEJAA
18 OUTPUT Message: Player successfully Signed Out
19 -----
20 Operation Performed : Transfer Player Account
21 Time Performed :11-07-2020 02:03:03
22 IPAddress Performed :182.1.2.3
23 userName Performed :SAICHARANTEJAA
24 OUTPUT Message: Transfer Account is successfully created !
25 -----
26 Operation Performed : Player Sign In
27 Time Performed :11-07-2020 02:04:47
28 IPAddress Performed :93.1.2.3
29 userName Performed :SAICHARANTEJAA
30 OUTPUT Message: Player successfully Signed In
31
```

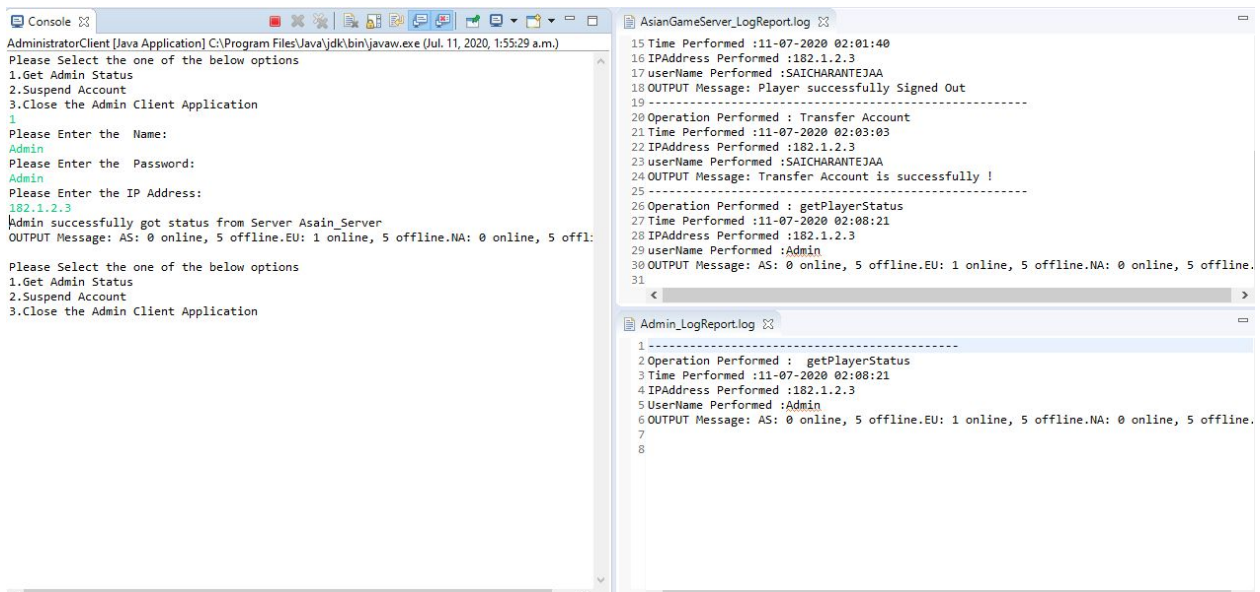
AsianGameServer_LogReport.log:

```
9 Time Performed :11-07-2020 02:00:26
10 IPAddress Performed :182.1.2.3
11 userName Performed :SAICHARANTEJAA
12 OUTPUT Message: Player successfully Signed In
13 -----
14 Operation Performed : Player Sign Out
15 Time Performed :11-07-2020 02:01:40
16 IPAddress Performed :182.1.2.3
17 userName Performed :SAICHARANTEJAA
18 OUTPUT Message: Player successfully Signed Out
19 -----
20 Operation Performed : Transfer Account
21 Time Performed :11-07-2020 02:03:03
22 IPAddress Performed :182.1.2.3
23 userName Performed :SAICHARANTEJAA
24 OUTPUT Message: Transfer Account is successfully !
25
```

EuropeanGameServer_LogReport.log:

```
1 -----
2 Operation Performed : Player Sign In
3 Time Performed :11-07-2020 02:04:47
4 IPAddress Performed :93.1.2.3
5 userName Performed :SAICHARANTEJAA
6 OUTPUT Message: Player successfully Signed In
7
```


6.Manual Testing for Admin

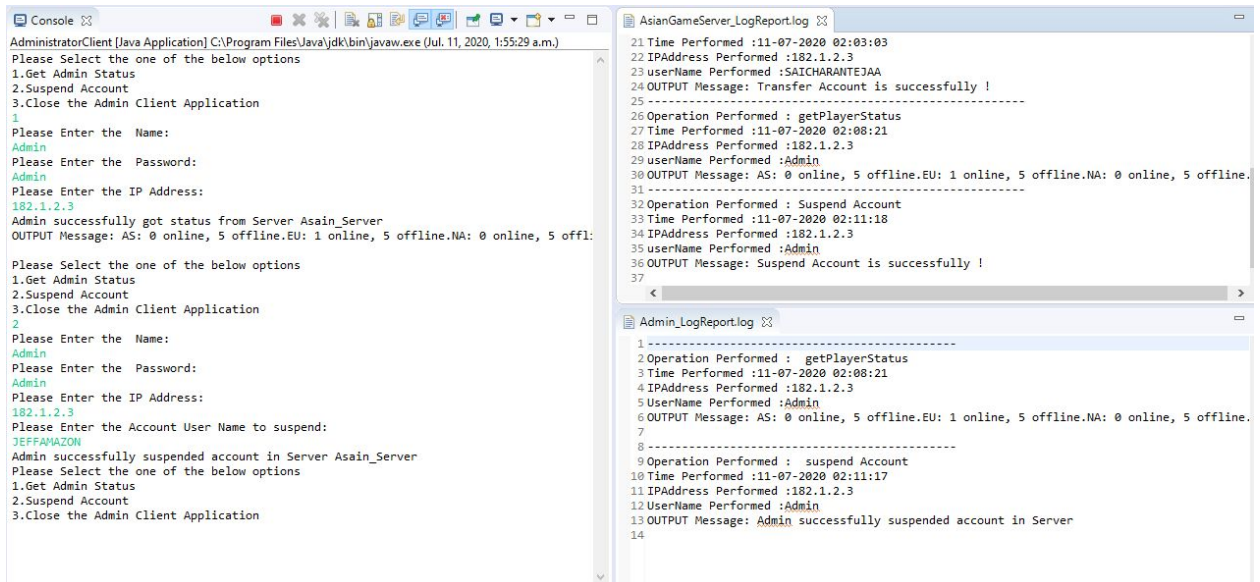


The screenshot displays two windows from a manual testing session. The left window is the 'Console' of the 'AdministratorClient [Java Application]' running at 'C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2020, 1:55:29 a.m.)'. It shows a menu with three options: '1.Get Admin Status', '2.Suspend Account', and '3.Close the Admin Client Application'. Option 1 is selected, and the user enters 'Admin' as the name, 'Admin' as the password, and '182.1.2.3' as the IP address. The console output shows 'Admin successfully got status from Server Asain_Server' and a detailed status message: 'OUTPUT Message: AS: 0 online, 5 offline.EU: 1 online, 5 offline.NA: 0 online, 5 offline'. The right window is the 'AsianGameServer_LogReport.log' showing log entries 15 through 31. It records the time performed, IP address, username, and output messages for the 'getPlayerStatus' operation, including the same status message seen in the console.

```
AdministratorClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2020, 1:55:29 a.m.)
Please Select the one of the below options
1.Get Admin Status
2.Suspend Account
3.Close the Admin Client Application
1
Please Enter the Name:
Admin
Please Enter the Password:
Admin
Please Enter the IP Address:
182.1.2.3
Admin successfully got status from Server Asain_Server
OUTPUT Message: AS: 0 online, 5 offline.EU: 1 online, 5 offline.NA: 0 online, 5 offline

Please Select the one of the below options
1.Get Admin Status
2.Suspend Account
3.Close the Admin Client Application

AsianGameServer_LogReport.log
15 Time Performed :11-07-2020 02:01:40
16 IPAddress Performed :182.1.2.3
17 userName Performed :SAICHARANTEJAA
18 OUTPUT Message: Player successfully Signed Out
19 -----
20 Operation Performed : Transfer Account
21 Time Performed :11-07-2020 02:03:03
22 IPAddress Performed :182.1.2.3
23 userName Performed :SAICHARANTEJAA
24 OUTPUT Message: Transfer Account is successfully !
25 -----
26 Operation Performed : getPlayerStatus
27 Time Performed :11-07-2020 02:08:21
28 IPAddress Performed :182.1.2.3
29 userName Performed :Admin
30 OUTPUT Message: AS: 0 online, 5 offline.EU: 1 online, 5 offline.NA: 0 online, 5 offline.
31
```



This screenshot shows the continuation of the manual testing process. In the 'Console' window, option 2 'Suspend Account' is selected. The user enters 'Admin' as the name, 'Admin' as the password, and '182.1.2.3' as the IP address. The console output shows 'Admin successfully suspended account in Server Asain_Server' and a detailed status message: 'OUTPUT Message: AS: 0 online, 5 offline.EU: 1 online, 5 offline.NA: 0 online, 5 offline'. The 'AsianGameServer_LogReport.log' window shows log entries 21 through 37. It records the time performed, IP address, username, and output messages for the 'suspendAccount' operation, including the same status message seen in the console.

```
AdministratorClient [Java Application] C:\Program Files\Java\jdk\bin\javaw.exe (Jul. 11, 2020, 1:55:29 a.m.)
Please Select the one of the below options
1.Get Admin Status
2.Suspend Account
3.Close the Admin Client Application
2
Please Enter the Name:
Admin
Please Enter the Password:
Admin
Please Enter the IP Address:
182.1.2.3
Admin successfully suspended account in Server Asain_Server
OUTPUT Message: AS: 0 online, 5 offline.EU: 1 online, 5 offline.NA: 0 online, 5 offline

Please Select the one of the below options
1.Get Admin Status
2.Suspend Account
3.Close the Admin Client Application

AsianGameServer_LogReport.log
21 Time Performed :11-07-2020 02:03:03
22 IPAddress Performed :182.1.2.3
23 userName Performed :SAICHARANTEJAA
24 OUTPUT Message: Transfer Account is successfully !
25 -----
26 Operation Performed : getPlayerStatus
27 Time Performed :11-07-2020 02:08:21
28 IPAddress Performed :182.1.2.3
29 userName Performed :Admin
30 OUTPUT Message: AS: 0 online, 5 offline.EU: 1 online, 5 offline.NA: 0 online, 5 offline.
31 -----
32 Operation Performed : suspend Account
33 Time Performed :11-07-2020 02:11:18
34 IPAddress Performed :182.1.2.3
35 userName Performed :Admin
36 OUTPUT Message: Suspend Account is successfully !
37
```

Logs are placed in Manual Testing Proof Logs Folder