CH3_002   EXERCISE

CLIENTGROUP

Exercise Files

 Starter – "Kit/gpgt/server/scripts/gpgt/chapter3/exercise002.cs"
Answers – "Kit/gpgt/server/scripts/gpgt/chapter3/answers/exercise002_f.cs"

Exercise Mission
Chapter 3: "002_GameConnection: ClientGroup"

Synopsis

In these exercises, we will examine the named SimGroup containing a list of all clients that a server is attached to. We will learn how to query this SimGroup for the clients it contains and how to acquire additional data about those clients and the server connections they attach to.

Prerequisites
1. ch1_001.pdf "Using The Kit"
2. ch3_001.pdf "Named Connections"

Exercises
1. Dump Clients (pg 2)
2. Identifying The Local Client (pg 3)
3. Getting The Server Connection (pg 4)

CLIENTGROUP

1 Dump Clients

Goal: Learn how to list all of the clients that a server is attached to.

Starter Code: You are provided with a single partially completed function named dumpClientGroup(). It is your task to complete this function so that it prints out a list of all clients that a server is attached to.

```
function dumpClientGroup()
{
    //echo("Client Group (", ?????.getID() , ") contains these clients:");

        //%count = ?????.getCount();
    for (%i = 0; %i < %count; %i++)
    {
        //%clientConn = ?????.getObject(%i);
        echo("Client #", %i, " ID: ", %clientConn.getID() );
    }
}
```

Steps:

Please uncomment the partially completed lines of code and replace the parts marked with a "?????" with the appropriate code.

Output Goal:

When you have completed this code, you can test it as follows.

1. Run the mission associated with this exercise.

2. Open the console (~).

3. Type: "dumpClientGroup();" and press return. You should see something similar to the following. (Your ID may be different.)

```
==>dumpClientGroup();
Client Group (1034) contains these clients:
Client #0 ID: 1585
```

Questions:

1. What would happen if this function were run on a machine running in client-only mode?

2. What code should be added to make this function safer / more robust?

Hints:

1. The answer to your task is in the name of this exercise.

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2 Identifying The Local Client

Goal: Modify the code from the last exercise to specifically identify the local client when dumping the client list.

Starter Code: You are provided with a single empty function named dumpClientGroup2().

```
function dumpClientGroup2()
{
}
```

Steps:

1. Please copy the answer you provided for dumpClientGroup() into dumpClientGroup2().

2. Please add the code necessary to identify the local client and modify the dump message as shown below (expected output).

Output Goal:

When you have completed this code, you can test it as follows.

1. Run the mission associated with this exercise.

2. Open the console (~).

3. Type "dumpClientGroup2();" and press return. You should see something similar to the following. (Your ID may be different.)

```
==>dumpClientGroup2();
Client Group (1034) contains these clients:
Client #0 ID: 1585 (localClientConnection)
```

Hints:

1. There is a named connection associated with the local client.

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3 Getting The Server Connection

Goal: Modify the code from the last exercise to acquire and dump the ID of the server connection that a client is attached to.

Starter Code: You are provided with a single empty function named dumpClientGroup3().

```
function dumpClientGroup3()
{
}
```

Steps:

1. Please copy the answer you provided for dumpClientGroup2() into dumpClientGroup3().

2. Please add the code necessary to acquire the ID of the server connection that a client is attached to. Then, print that information in the dump.

Output Goal:

When you have completed this code, you can test it as follows.

1. Run the mission associated with this exercise.

2. Open the console (~).

3. Type "dumpClientGroup3();" and press return. You should see something similar to the following. (Your ID may be different.)

```
==>dumpClientGroup3();
Client Group (1034) contains these clients:
Client #0
 > ClientConnection: 1585 (localClientConnection)
 > ServerConnection: 1584
```