

Tic Tac Toe Game V

Implement a discovery service. Players should not need to know the address of another player they want to connect to. Rather they should be able to connect to others by selecting them from a list or entering a human readable name.

If an instance of the program is supposed to be connected to via a discovery service, it should be started like so:

```
tttgame.exe runat=tcp://xyz:8080 discoservice=tcp://disco:9000 alias=jim_ny99
```

The discoservice parameter specifies the address of the discovery service. And the alias is used to identify the instance in a more personal way.

```
Running at tcp://xyz:8080 as jim_ny99  
Not connected.
```

```
  A B C  
0 | |  
-+--+  
1 | |  
-+--+  
2 | |  
Command:
```

To connect to another instance the user enters the “hello” command followed by the alias of another instance, e.g.

```
Running at tcp://xyz:8080 as jim_ny99  
Not connected.
```

```
  A B C  
0 | |  
-+--+  
1 | |  
-+--+  
2 | |  
Command: hello mandyX
```

```
Running at tcp://xyz:8080 as jim_ny99  
Connected to mandyX.
```

```
  A B C  
0 | |  
-+--+  
1 | |  
-+--+  
2 | |  
Command:
```

A connection will be established, if the other instance is still registered with the disco service and not already connected. Otherwise an error message is displayed.

To disconnect use the “bye” command. The program then keeps running and stays connected to the disco service.

Upon connection a new game is started and the instance connecting is assigned to be player 2.

If the alias of the other instance is not known, a list of currently unconnected instances can be requested from the disco service with the “aliases” command:

```
Running at tcp://xyz:8080 as jim_ny99
Not connected.
  A B C
0 | |
-+-+
1 | |
-+-+
2 | |
Command: aliases
```

List of available instances:

```
peter_london, paul63, holymoly, mandyX, ralfw, Morningstar
```

Command:

The list should not contain the instance requesting it. The order in which to list the aliases is up to the implementer.

Aliases are unique. Trying to register with the disco service using an alias already registered leads to an error message, e.g.

```
C:\> ttgame.exe runat=... discoservice=... alias=mandyX
Registering with discovery service...
Registration rejected: alias 'mandyX' already in use.
C:\>
```