



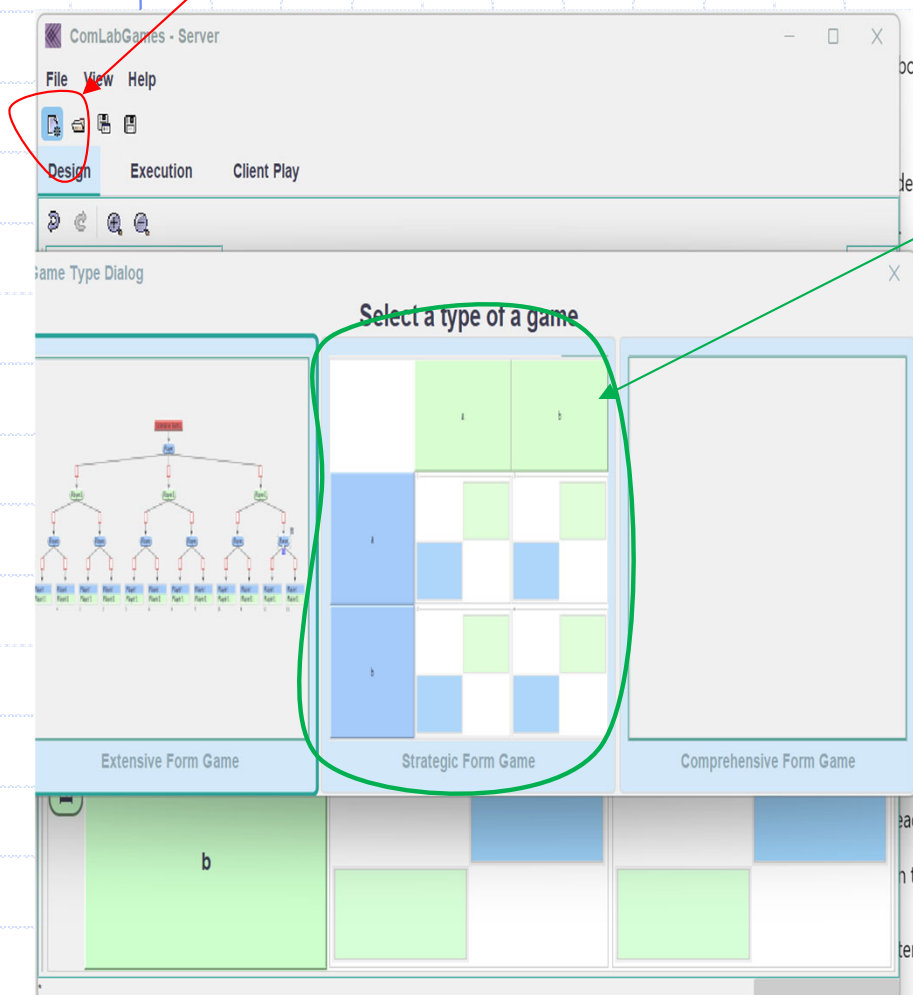


Part 1: Designing a Game in Strategic Form

This is a set of instructions for designing the strategic form with a matrix representation.

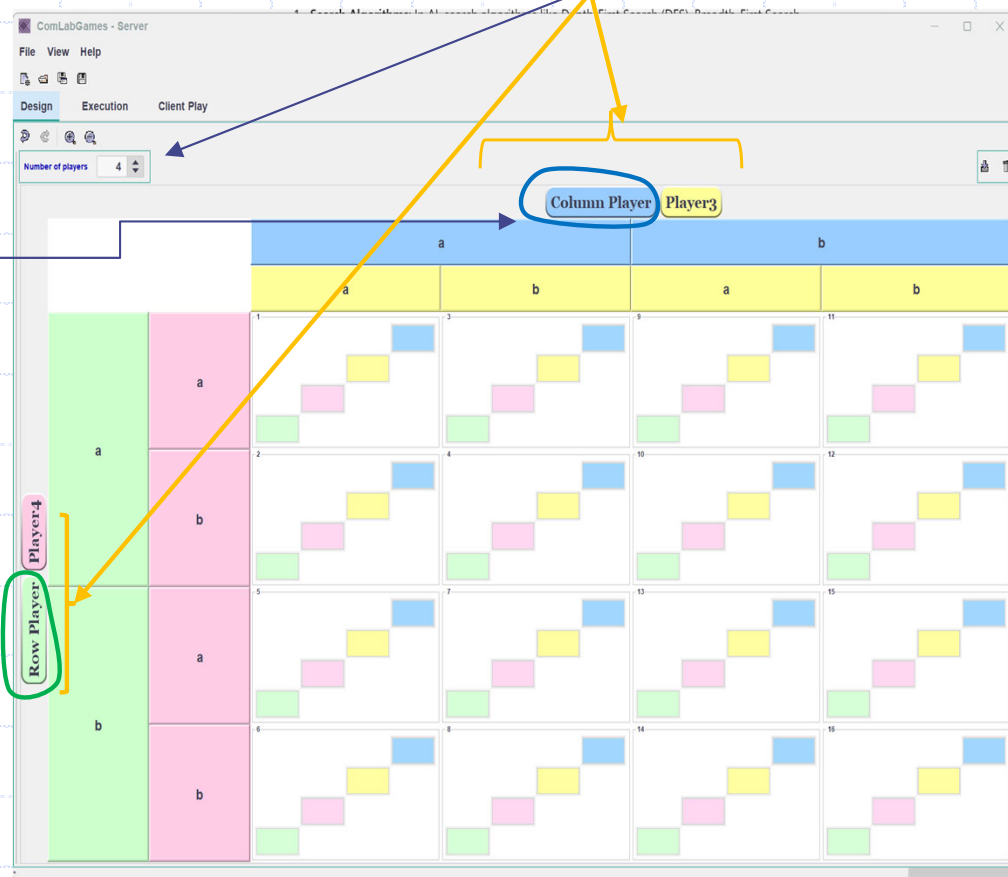
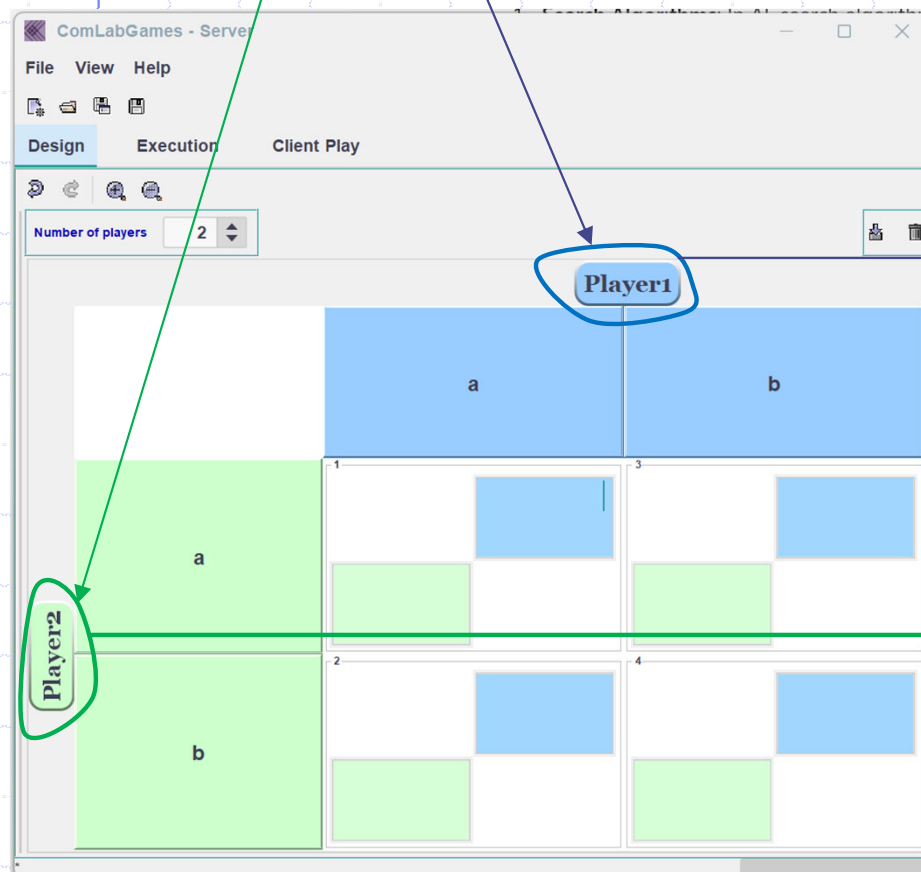
Opening a strategic form game

1. Click on  window.
2. Click on  (new definition) and select "Strategic Form Game"
3. By default two player 2x2 matrix is created.

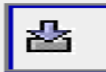



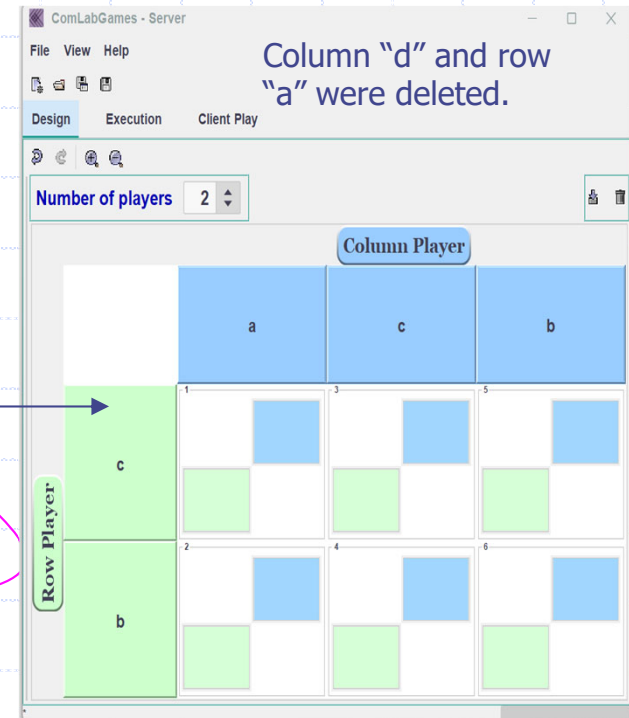
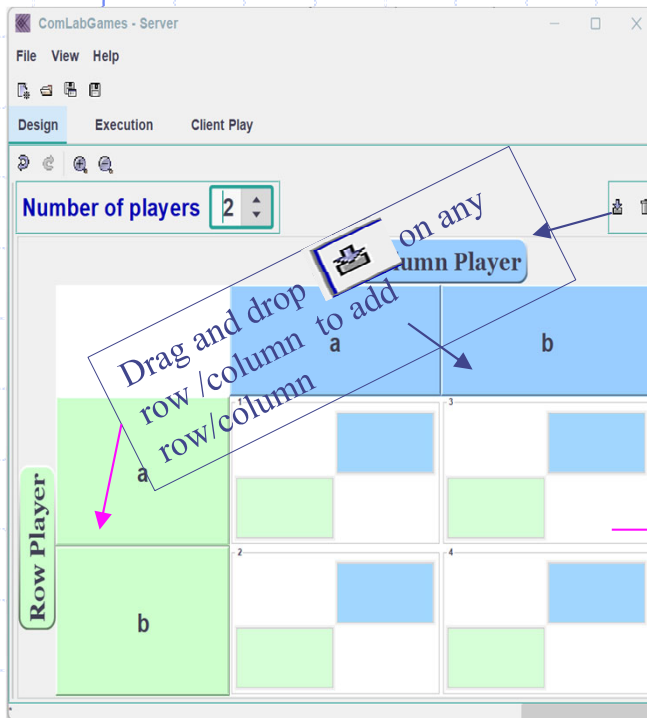
Designing a strategic form game

1. To *rename* players, double click on **Player1** / **Player2** and rename it (for example to: **Column Player** and **Row Player**).
2. To *increase* number of players, select the number of players from **Number of players** 2 to up to four: **Number of players** 4



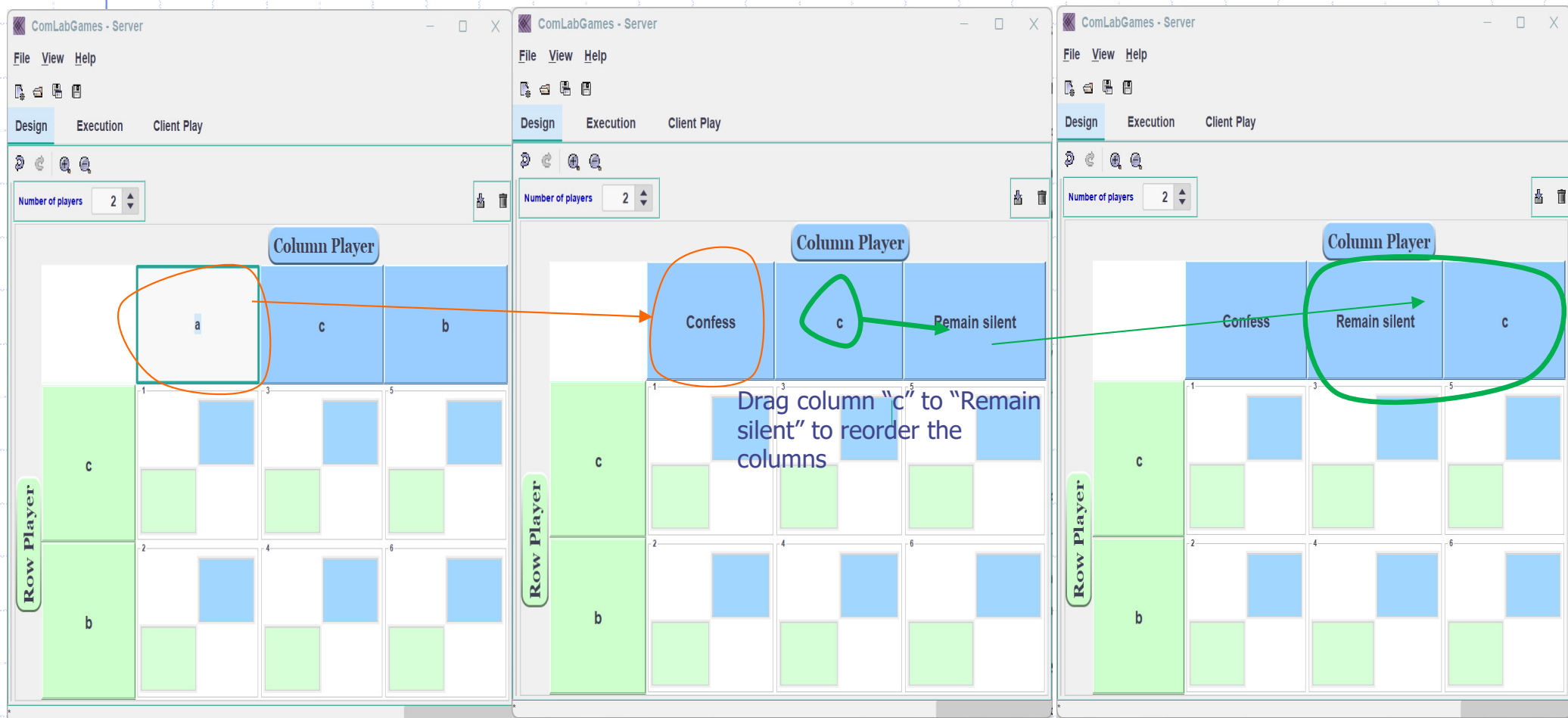
Adding and deleting rows and columns

1. To add a row or a column, drag and drop  on any row/column you want to add.
2. To delete a row or a column, drag and drop  to the row/column you want to delete. Repeat a process to delete another row/column.



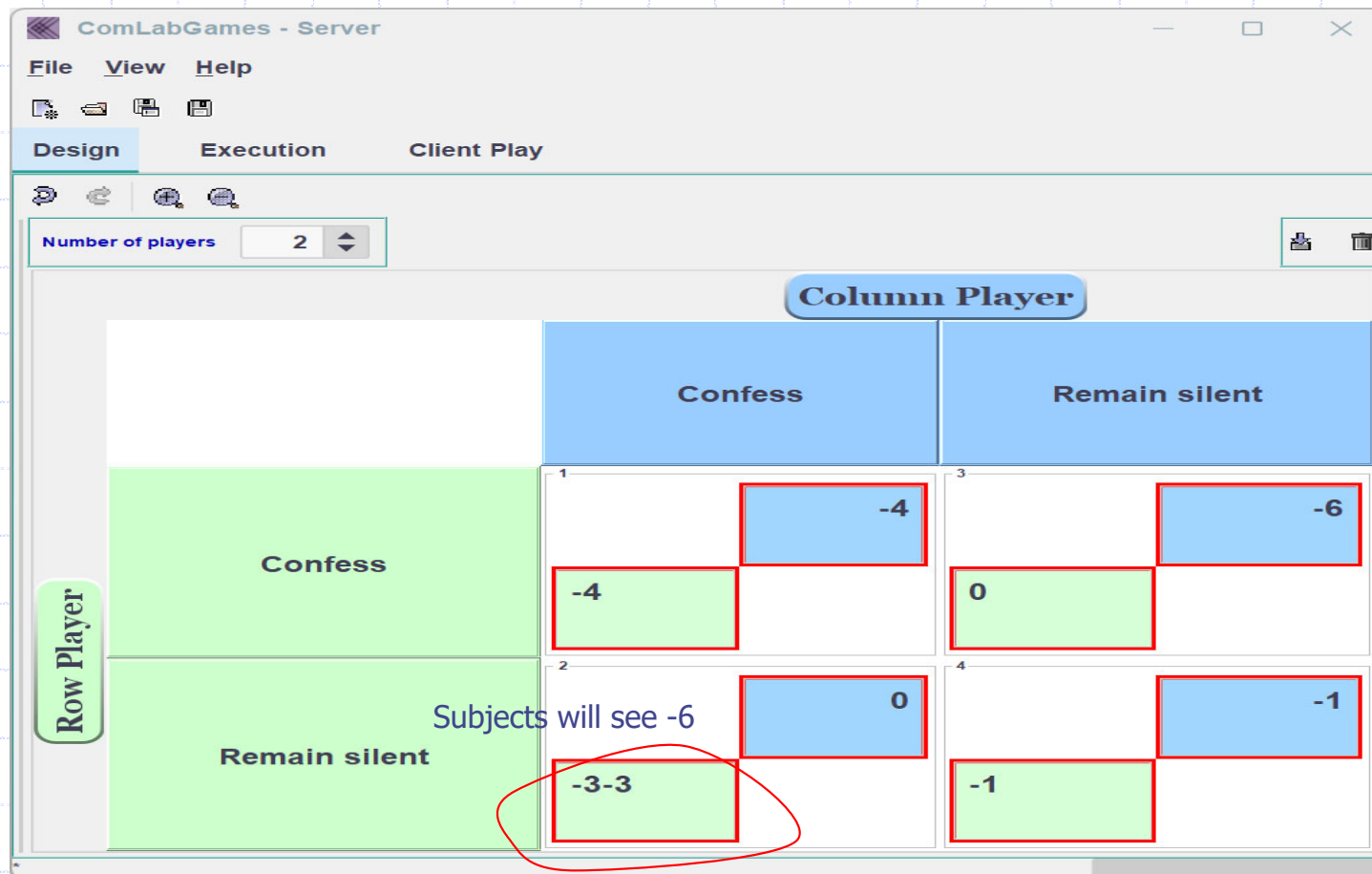
Labeling and reordering strategies

1. Double click on a strategy and rename it.
2. To reorder a strategy, drag and drop a strategy to the desired place.

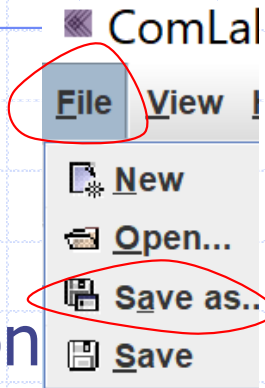


Editing payoffs

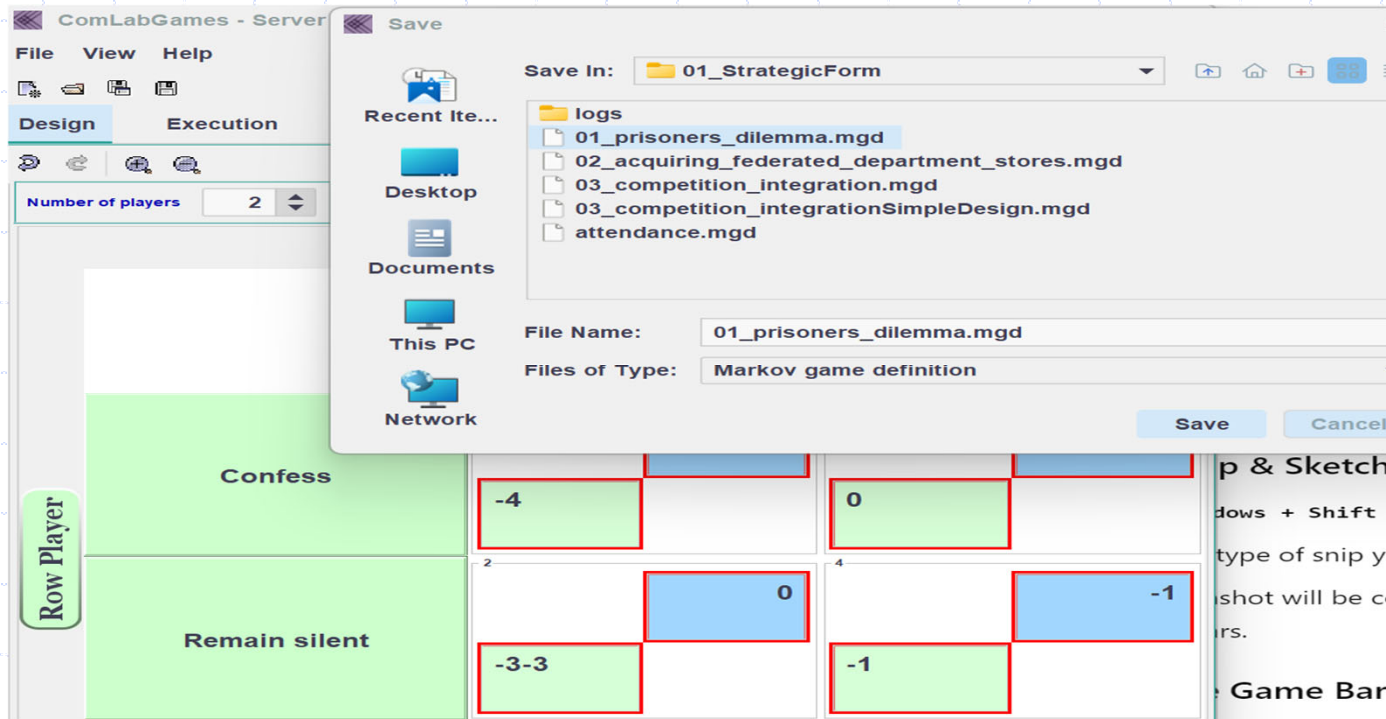
1. By default all payoffs are set to zero. Subjects will see zero payoffs if they are not edited.
2. To change a payoff, write a number or a formula in the payoff cell.




Saving a matrix game as a file

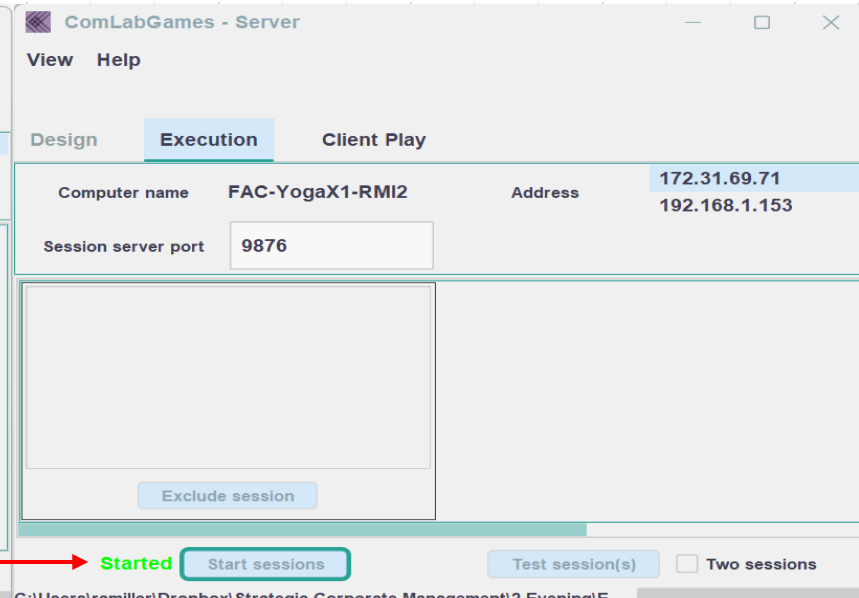
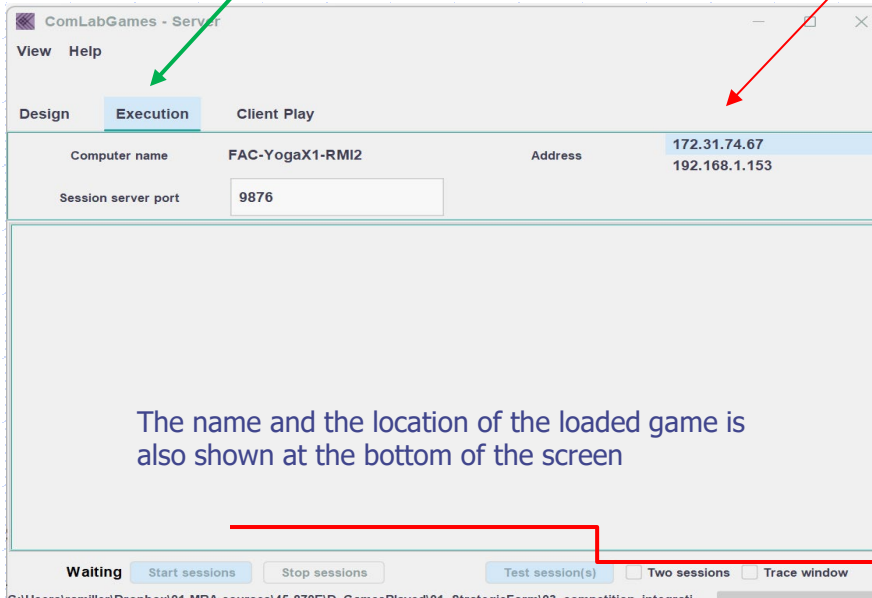


Click on **Save as..** and save the file. The program automatically adds suffix "mgd".



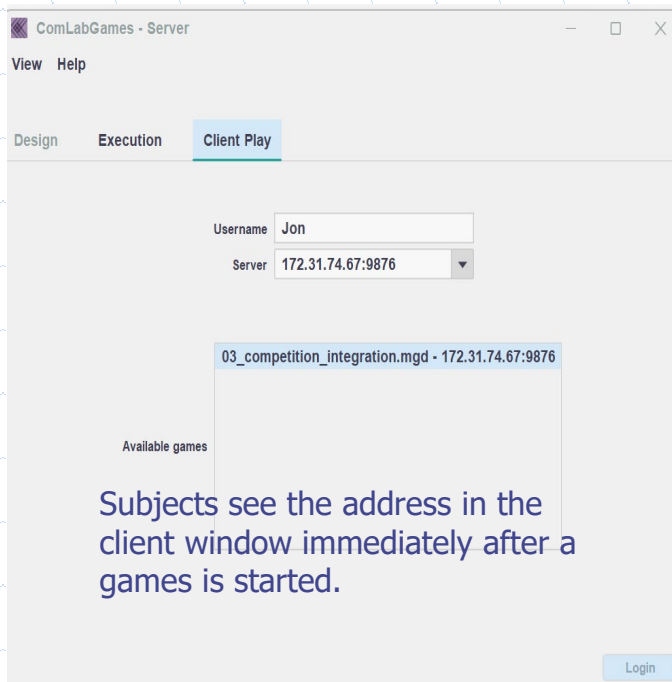
Steps for conducting an experiment

1. If you are running experiment from home, make sure you are connected to CMU via VPN:  before you open ComLabGames program.
2. Open ComLabGames and open "Strategic Form Game" in the design: **Design** window.
3. Select **Execution** tab. Make sure 172.... address is highlighted.
4. Click on **Start sessions**.

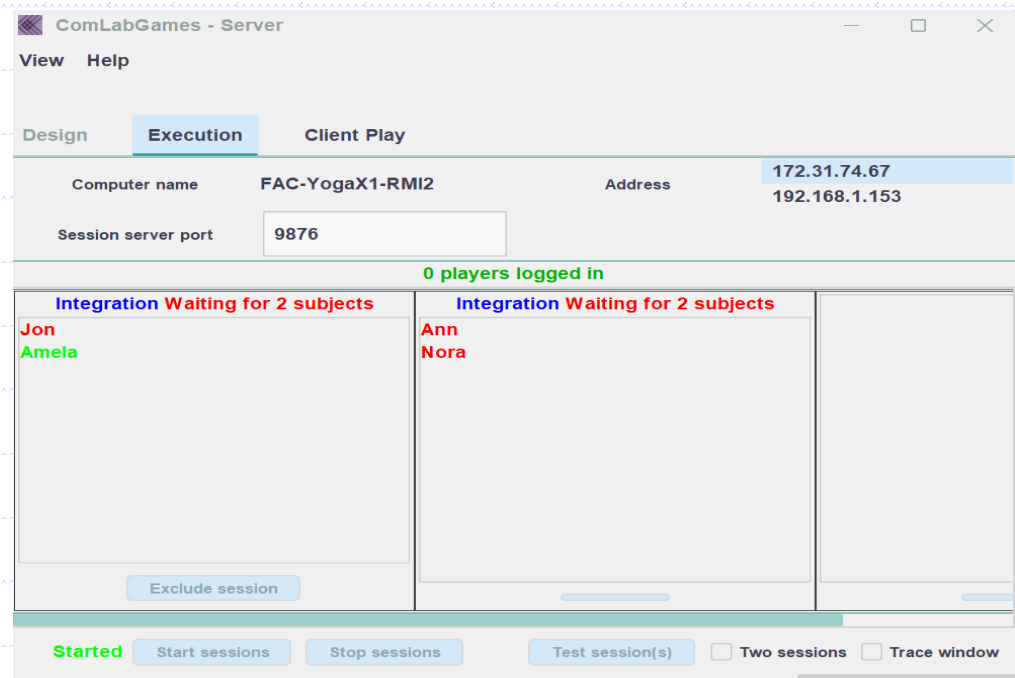


Monitoring the experiment

1. Address 172.... will appear in Client Play" window when you start a session.
2. Pairing of subjects is shown in execution window. A subject whose turn is to decide is colored in red.
3. Subject who made a decision is colored in green.

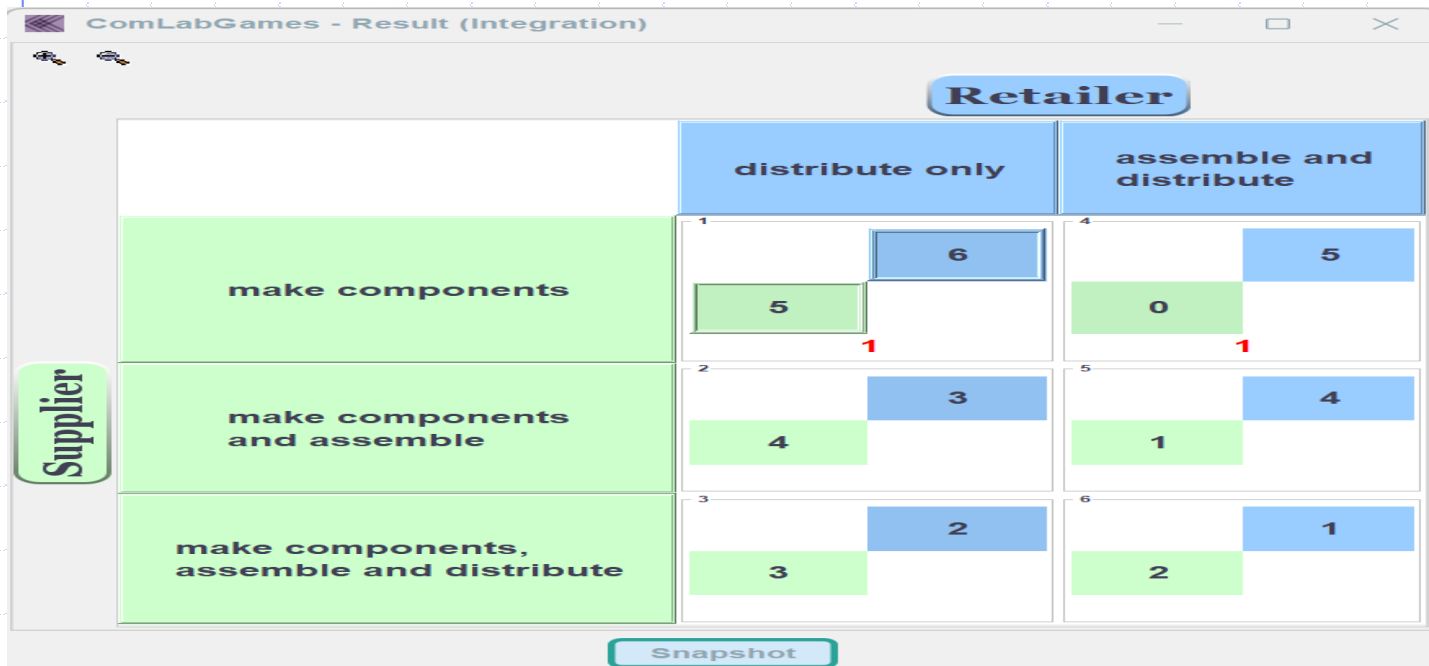


Subjects see the address in the client window immediately after a games is started.






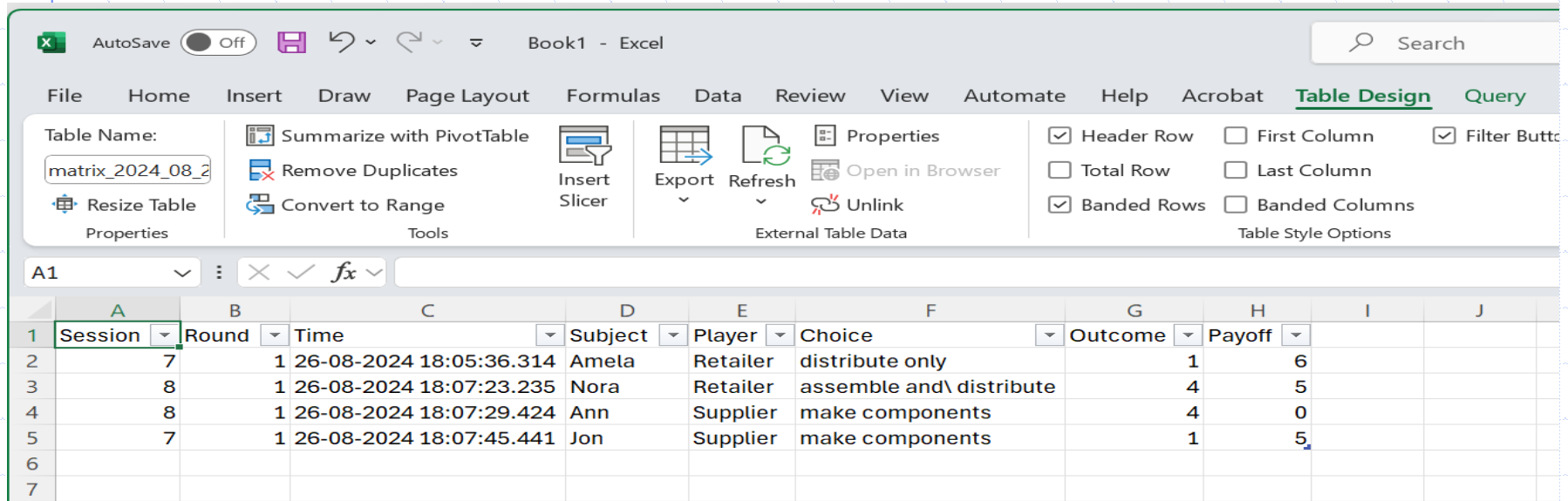
Result window

1. Once subjects selected decisions the frequency of each selected cell is shown in Result.
2. Click on "SnapShot" to save the matrix representation of the results. It will be automatically saved in the game directory.



Output file

1. Subdirectory  in the directory where the game was saved is automatically created once you stop running an experiment.
2. Output file in *.csv format is saved in .
3. The name of the file has the following name: matrix-date-hour- min-sec-name of the game, like:  matrix_2024-08-26_18-02-24_03_competition_integration




Session	Round	Time	Subject	Player	Choice	Outcome	Payoff
1	7	1 26-08-2024 18:05:36.314	Amela	Retailer	distribute only	1	6
2	8	1 26-08-2024 18:07:23.235	Nora	Retailer	assemble and\ distribute	4	5
3	8	1 26-08-2024 18:07:29.424	Ann	Supplier	make components	4	0
4	7	1 26-08-2024 18:07:45.441	Jon	Supplier	make components	1	5

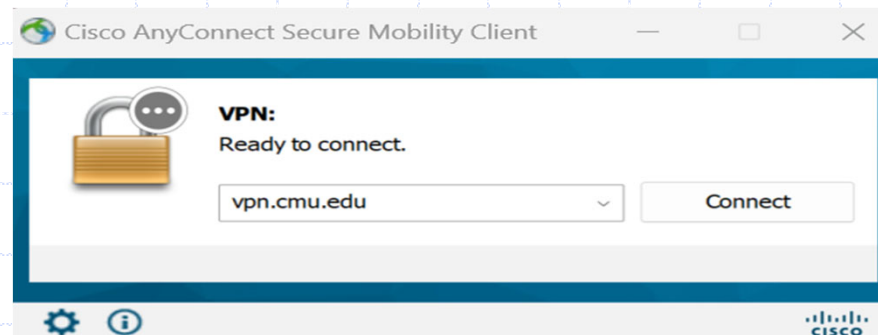
- "Session #" shows subjects who were assigned to play together.
- "Time" represents the time of a decision by each player/nature move
- "Subject" records login name
- "Player" records assigned role to a subject.
- "Choice" records the choices subjects selected.
- "Outcome" is a terminal node.

Part 2: Playing Strategic Form Games

These notes describe the mechanics of playing a strategic form game (as a client). These instructions apply to the games you play in class, and to those you play within your team.

VPN Connect when not in the same classroom

1. Before starting Comlabgames software , make sure to connect to the same network that the server runs the game. This instructions are for subjects who login from different locations that are not part of the same network.
2. Open Cisco AnyConnect Secure Mobility Client and Connect to VPN address. Below is the example for CMU address. Follow the address of your institution.



Competition through integration

◆ In this game, a specialized supplier of components for a durable good has the option of integrating downstream.

◆ The supplier, for example, could start its own dealerships.


◆ A retailer who markets the good could integrate upstream and produce its own store brand.

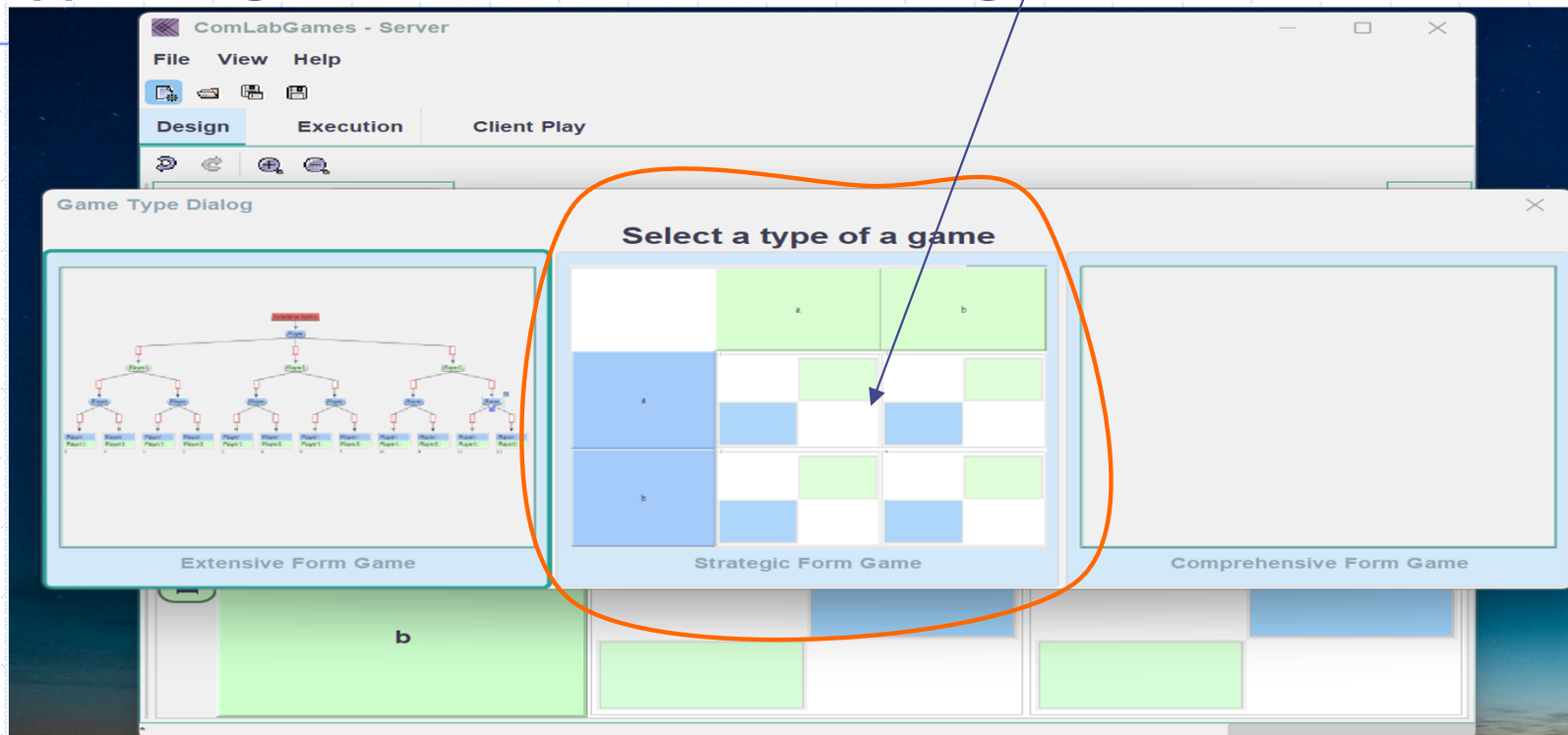
		Retailer	
		distribute only	assemble and distribute
Supplier	make components	1 5, 6	4 0, 5
	make components and assemble	2 4, 3	5 1, 4
	make components, assemble and distribute	3 3, 2	6 2, 1

◆ The supplier's profits are higher if the retailer only distributes.

◆ The more integrated the supplier, the lower the retailer's profits.

Login instructions

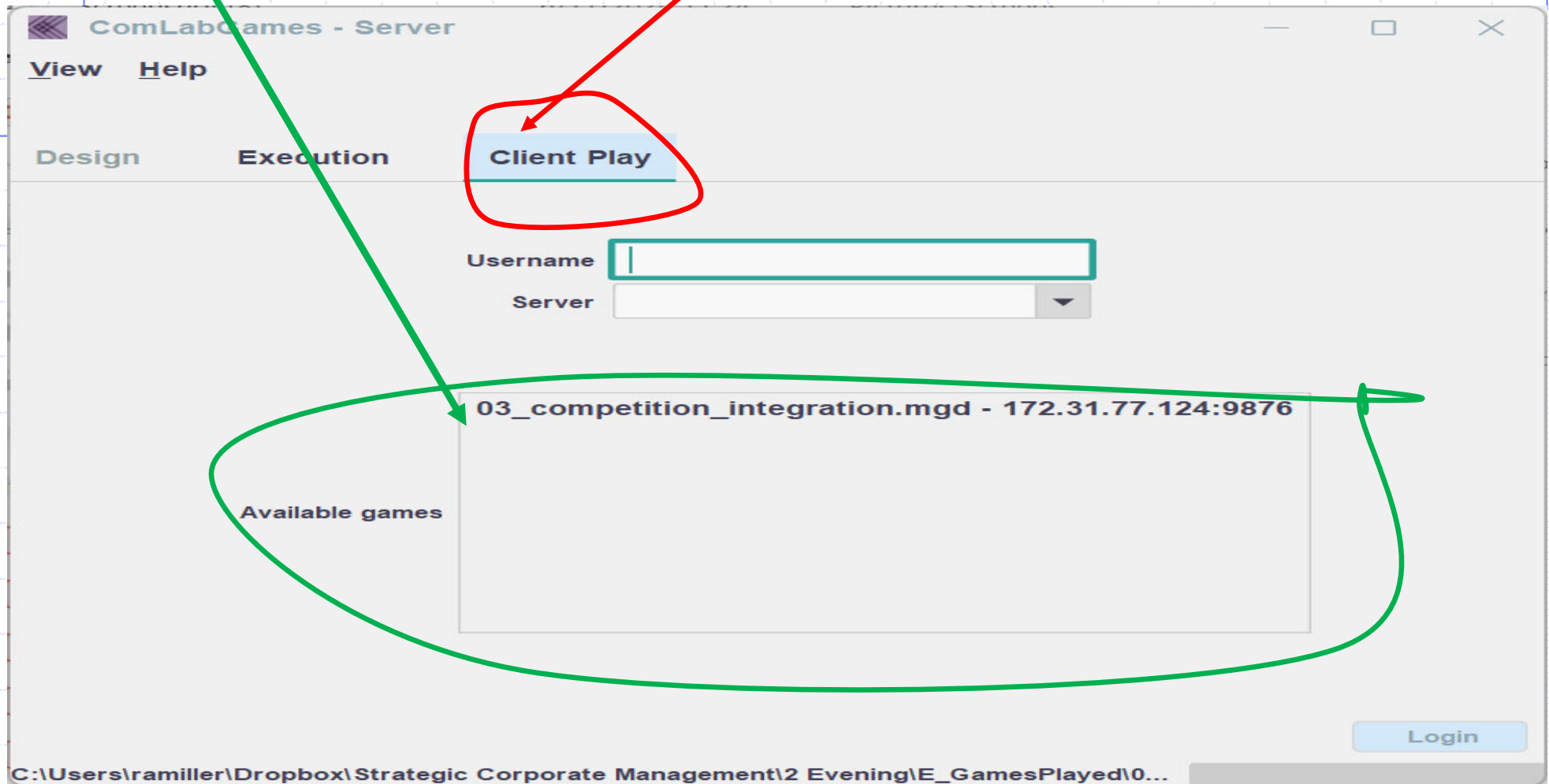
1. Double click on the ComLabGames app  to start the software.
2. The first time ComLabGames prompts you to "*Select a type of game*" : Click on "*Strategic Form Game*"



3. The Design window is displayed by default after the first start of the program.

Continuing login instructions

1. To play a game, click on "*Client Play*".
2. Click on Available games:
"03_competition_integration.mgd..."



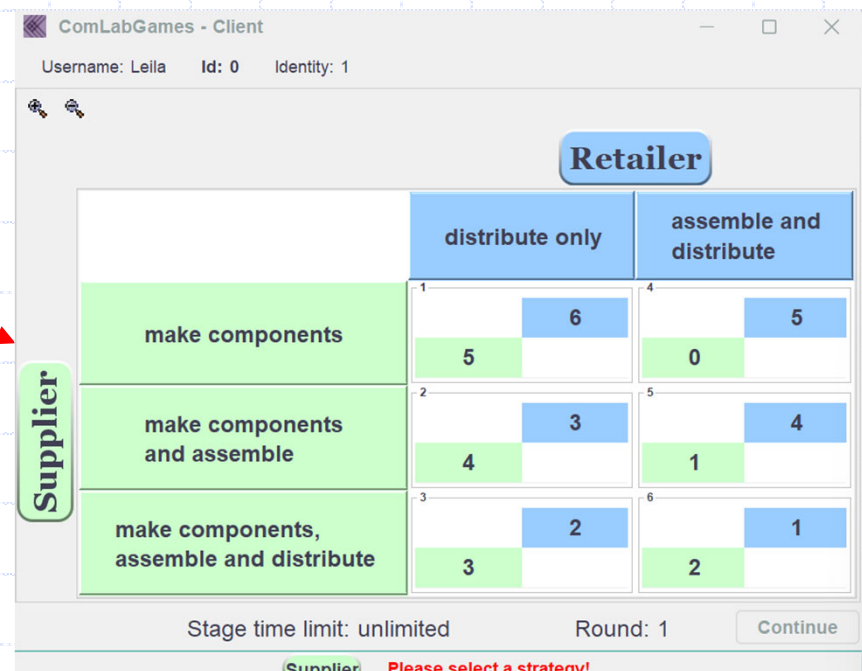
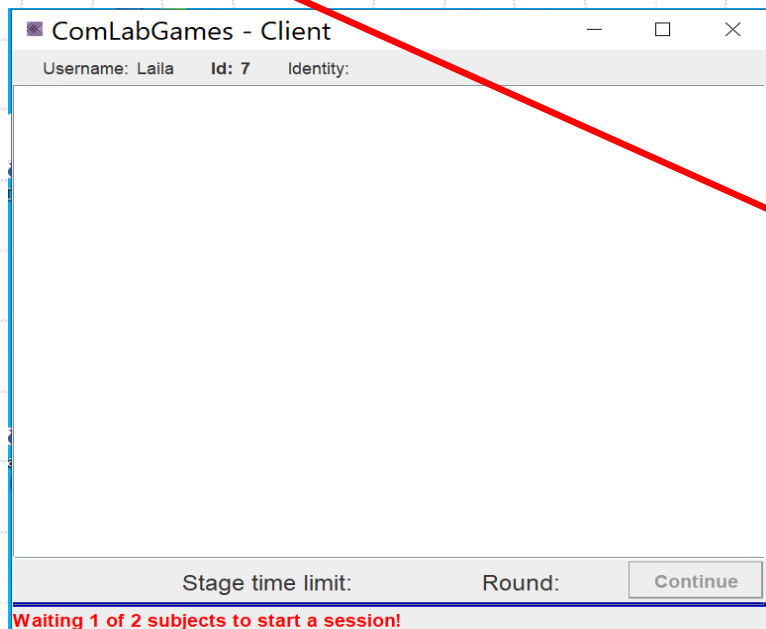
How to login

1. Server address: 172.31.77.124:9876 should appear automatically after selecting "03_competition..."
2. If not, type 172.31.77.124:9876 in Server.
3. Then write your (proxy) name under "Username".
4. Click on "Login" to start playing the game.



Game windows

1. Two subjects must login to start the illustrated game.
2. The first subject to login will see a **blank screen** with username: `Username: Laila` above.
3. When the required number of subjects login the **strategic form** replaces the blank window.



Selecting a strategy

1. Moving the mouse between rows/columns without clicking highlights the player's alternatives.
2. Clicking on row/column selects a strategy: if you are a row (column) player that **row** (column) will be highlighted.
3. You cannot cancel a selection.

ComLabGames - Client

Username: Leila Id: 0 Identity: 1

Retailer

	distribute only	assemble and distribute
make components	1 6 5	4 5 0
make components and assemble	2 3 4	5 4 1
make components, assemble and distribute	3 2	6 1 2

Supplier

Stage time limit: unlimited Round: 1 Continue

Supplier Please wait for other players to make their choices!

Waiting 1 of 2 subject(s) to proceed the session!

ComLabGames - Client

Username: Joan Id: 7 Identity: 2

Retailer

	distribute only	assemble and distribute
make components	1 6 5	4 5 0
make components and assemble	2 3 4	5 4 1
make components, assemble and distribute	3 2	6 1 2

Supplier

Stage time limit: unlimited Round: 1 Continue

Retailer Please wait for other players to make their choices!

Waiting 1 of 2 subject(s) to proceed the session!

Results from strategy selection

1. Once both subjects made a selection the payoffs are highlighted.
2. The outcome cell counter is displayed in red.

ComLabGames - Client

Username: Leila Id: 0 Identity: 1

		Retailer	
		distribute only	assemble and distribute
Supplier	make components	1 5 6	4 0 5
	make components and assemble	2 4 3	5 1 4
	make components, assemble and distribute	3 3 2	6 2 1

Stage time limit: unlimited Round: 1

Supplier Please click Continue!

Waiting 2 of 2 subject(s) to proceed the session!