

General Game Playing

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Exercise 1.1

Form a team consisting of preferably 3 people (2 or 4 is also accepted) for the programming assignments and the competition. Invent a name for your team and player. Send me an email (stephan.schiffel@inf.tu-dresden.de) with the names, email addresses and logins of the computing center (FRZ) of all team members by Nov 2nd.

All other tasks should be done in teamwork.

Exercise 1.2

Fill out the following grids with an example of a game of the appropriate type in each cell. Consider only games that can be modeled with the state machine model.

- Single-Player Games

Complete Information	Partial Information

- Multi-Player Games without Communication

	Complete Information	Partial Information
Simultaneous Moves		
Alternating Moves		

- Multi-Player Games with Communication

	Complete Information	Partial Information
Simultaneous Moves		
Alternating Moves		

Which classes of games can be described with the GDL?

Exercise 1.3

Which properties must a well-formed game have (see definitions 21 to 25 in the GDL spec)?

Pick a popular game. Is it well-formed? Explain why (or why not)!

Exercise 1.4

Invent a game (or find an existing one) which can be described with the GDL, but is not already available on <http://ggpservers.general-game-playing.de/> or the course web-page. If you don't have an idea think about interesting variants of known games, e.g., combine concepts of different games, change the number of players, the goals of the players, etc.

Send me an email with a description of the rules of the game.

Exercise 1.5

Download some basic player code and the gamecontroller from the course webpage (http://www.inf.tu-dresden.de/index.php?node_id=2446). Play some simple games with the player. Familiarize yourself with the source code of the player.

Note: You are not required to use the provided code. You can use whatever programming language you like and all (legal) resources you find to implement your player. However, implementing a parser and reasoner for GDL is time consuming. Therefore, we recommend not to start from scratch.