# TERMS Card Version v.2.0

Battle of Golems - educational game algorithmic and programming for 2 players.

## Composition of the game:

1 The game field 4x4 and 6x6 for 2 players;
2. Figures 2 golems for players - red and blue;
3 Cards for the game (44):

Action Cards (18):
3.1. " Forward" - 3 pcs. for the player;
3.2. "Backward" - 3 pcs. for the player;
3.3. "Turn Left" - 2 pcs. for the player;
3.4. "Turn Right" - 2 pcs. for the player;
3.5. "Stand in place" - 3 pcs. for the player;
3.6. "Attack" - 2 pcs. for the player;
3.7 "Defence" - 2 pcs. for the player;
3.8 "Take" – 1 pcs for player

Bonus Cards  (per player):
3.9. Card "Is enemy?" - 1 pcs;
3.10. Card "Under attack?" - 1 pcs;
3.11. Card "LOOP 2 times" - 1 pcs.
3.12. Card "LOOP 3 times" - 1 pcs.


4. Tocken of life - 3 pcs. for the player.
5. Tocken of barriers – 10 Barrels, 5 Waters и  6 Walls.

6. Cubes or spinning tops..

## Game Rules

The task of the game - to win the Golem opponent, making the winning algorithm. The game consists of two steps in each round:


### 1 ACTION: Drawing algorithm for your Golem actions.

Players set algorithm stroke Golem, spreading action cards. Recommended spread cards face down, so that other players cannot see the future moves of opponents.

For beginners LOOP and IF do not use the card, and they lay face up. If the players are more experienced and can make a more complex program, it is necessary to throw dice bonuses (steep top) - they show the presence of the current round of LOOP 2, LOOP 3 blocks and IF. (LOOP 2 is a repeat steps 2 times, LOOP 3 – 3 times).

If a player drops out IF, it is the current course can choose a variant of the proposed and take the appropriate card. A player may refuse the use of IF or LOOP in the current round.

Stroke is defined by putting some card action moves to 1-4. If a player has a card in the hands of the IF or LOOP, they can also spread by putting on top of the left and right margins IF or LOOP cards desired Action Card.

## 2 ACTION: Execution of the algorithm for a given program:

Players perform simultaneous action moves to 1-4. If the current course is a LOOP, then the player performs an action card specified number of times.

If current progress is IF card, then it has a priority lower than that of movement cards. If there is a condition "Is enemy?", the check is performed only after the movement of the opponents of this move. Condition "Is enemy?" applies to barrels and other destructible objects in the game.

If two players are trying to go to the same cell, the action is considered to be unenforceable and does not count any of the players. Similarly, a move is not performed when the edge of the field or impassable barriers (barrels or stone wall) on the field. The Walls and the Water is not perceived as the enemy and the Golem will try to move on this cell!

The player may take the attack just right in direction to the next cell. The player can defend against any attacks - front, back, side.

Movement has higher priority !. In one stroke movement is performed first, and then verify the conditions and kick.

On a successful attack the enemy the player loses one life from the Golem (there are 3) and it is drawn map of life. Player is killed, when he has no cards of lives.

Then begins the next round and the game continues until one player wins.

The winner is the player whose Golem left alone on the field.

## Barrier tockens

Barrier tokens are the following:
1. Barrel. Does not make a move to the cell, where it stands. Golem is perceived as the enemy. Can be destroyed kick. Golem can Take Barrel (but it can release it only when it strikes an opponent).

2.  Wall. Does not make a move to the cell, where it stands. Is not perceived as the enemy. Not destructible. You can not Take it.
3.  Water. When you try to make a move on a square occupied by water, the golem loses one life and comes back. Not destructible. You can not Take it.

## Start the game

At the beginning of the game is given by the field. You can just play on the field 4x4, as well as barriers to use the maps.

Golems are placed in opposite corners of the field, unless otherwise specified by the script.

For beginners, we recommend the use of a prime field without obstacles.

Subsequently, you can complicate the game, introducing new units and maps of the supplements thereto or increasing the size of the field to 4x4 to 6x6.

Each player is dealt cards blocks:

Action Cards (18):
1. " Forward" - 3 pcs. for the player;
2. "Backward" - 3 pcs. for the player;
3. "Turn Left" - 2 pcs. for the player;
4. "Turn Right" - 2 pcs. for the player;
5. "Stand in place" - 4 pcs. for the player;
6. "Attack" - 2 pcs. for the player;
7 "Defence" - 2 pcs. for the player;
8 "Take" – 1 pcs for player

Bonus Cards  (per player):
9. Card "Is enemy?" - 1 pcs;
10. Card "Under attack?" - 1 pcs;
11. Card "LOOP 2 times" - 1 pcs.
12. Card "LOOP 3 times" - 1 pcs.

Players do not need to spy programs from each other!


# Versions of the game.

## Game for beginners

The game is for 2 players. 4x4 field with no further barriers. Cubes (spinning tops) are not used, the game exclude LOOP and IF.

## Standart game

4x4 field or 6x6 for 2 players. Cubes (spinning tops)  rush at the beginning of the course, determining the possibility of using LOOP or IF.

## Autonomous golems

The game runs on the field 4x4. Initially given by the movement algorithm using loops and conditions. After setting the program the players begin to move in an endless cycle of repetition rounds. Conditions and related actions are checked anyway. You can use a LOOP inside condition IF (but not vice versa).

## Sceneries

Field represents one of the scenarios. Next to the victory of one of the parties must perform in a given scenario, the goal
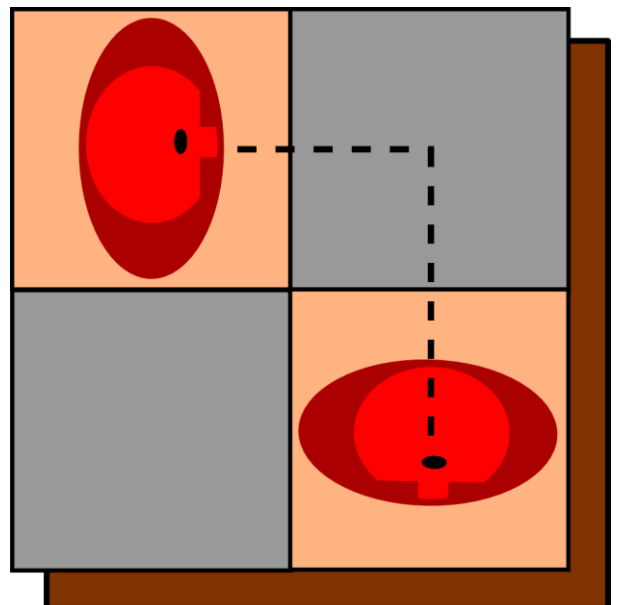
## Puzzles

Puzzles designed for one player. You need to specify the initial field and draw up a program for the golem to the required conditions: a certain number of moves, all the cards, the use of repeat or conditions, etc.

# Examples of moves

### Golem moving

1  Forward
2. Turn Right
3. Forward
4. Forward

Since in the course of 4 to Golem edge of the field, the course is ignored.
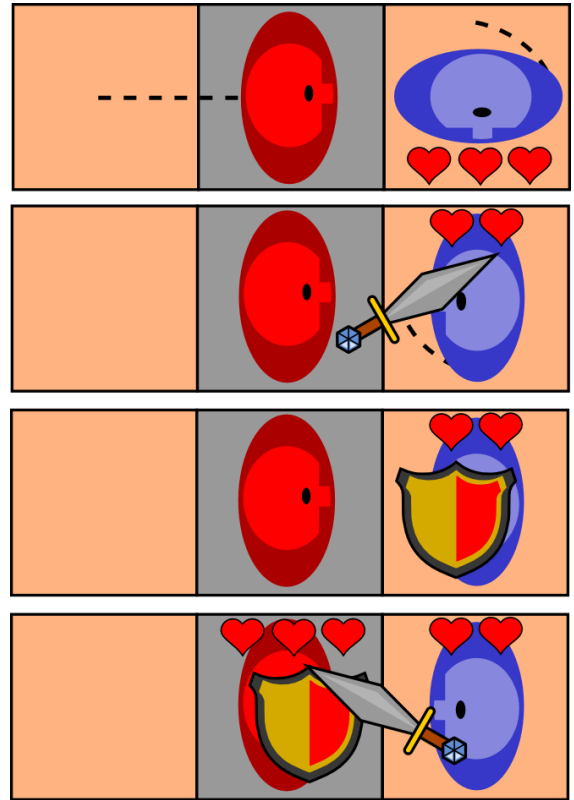
# Attack and Defence

Golem 1 (red)

1. Forward
2. Attack
3. Stand in place
4. Defence

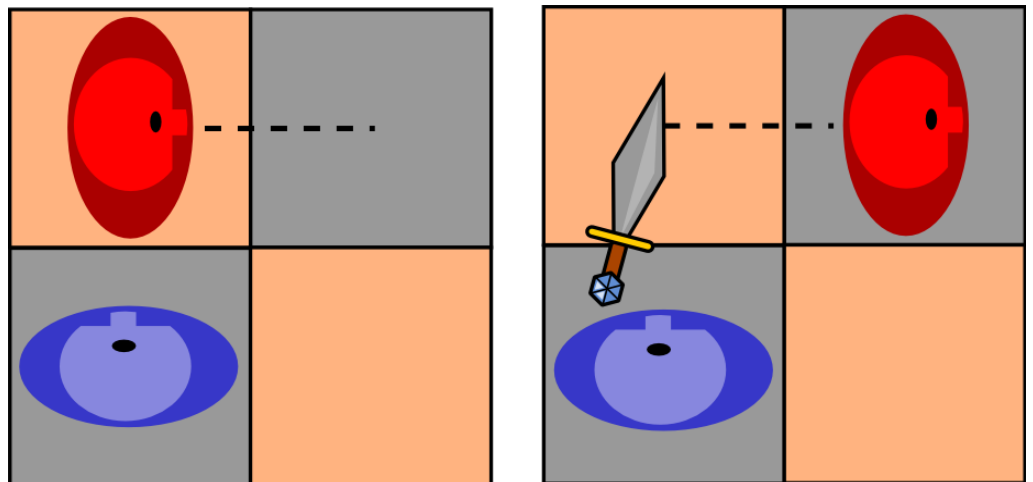Golem 2 (blue)

1. Turn Right
3. Turn Right
4. Defence
5. Attack

# Attack avoiding

Golem 1 (red)

1. Forward
2 ….

Golem 2 (blue)

1. Attack
2. ...

The Attack will not be executed, since red Golem already gone to the next cell.

# Destroyable obstacle

1. Forward (the course will not be made, as in the way of Barrel)
2. Fight (Barrel destroyed)
3. Forward
4. Forward