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Abstract

A formal specification for the agile game “tap the shoulder”.

Tap The Shoulder

Specification

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# Feature: Estimation

A key part of the games is that players are to estimate the number of steps they will take to reach each one of their goal. Not until everyone has done estimation, the execution can start. When the players moves during execution, their steps are counted.

## Scenario: Game execution waits for estimation

Given a game is in phase "assignment"  
And a player named "Alice"  
But "Alice" has not estimated all their goals  
When the facilitator starts the game  
Then the game is in phase "assignment"

## Scenario: When players move, their steps are counted

Given a game is in phase "gathering"  
And the player is at position 1,1  
And a player named "Alice"  
And the facilitator starts the assignments  
When all players has done their estimations  
And the facilitator starts the game  
And the player moves in direction "up"  
Then the player's steps for the first goal are 1  
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# Feature: Game Execution

The game has an execution phase where each player has three goals to reach, a first player and second player to tap on the shoulder and finally return to their starting position. The players are assigned their goals during the assignment phase.

## Scenario: A player gets immediately a third target, the starting point

Given the player is at position 3,1  
Then the player has end goal to reach 3,1

## Scenario: As the facilitator starts the assignment, players gets two other players as goal

Given a game is in phase "gathering"  
And the player is at position 1,1 named "Jill"  
And a player named "Caren"  
And a player named "Betty"  
When the facilitator starts the assignments  
Then player named "Jill" has two goals "Caren" and "Betty"  
And player named "Caren" has two goals "Jill" and "Betty"  
And player named "Betty" has two goals "Caren" and "Jill"

## Scenario: When a player moves close to their first goal player, the first goal is reached.

Given a game is in phase "assignment"  
And the player is at position 1,1 named "P"  
And a player named "A"  
And a player named "B"  
And the board looks as:  
And 0 "| | | | | |"  
And 1 "| |P| |A| |"  
And 2 "| | | | |B|"  
And player named "P" is assigned the two goals "A" and "B"  
And all players has done their estimations  
When the facilitator starts the game  
And the player moves in direction "right"  
Then the board should look like:  
And 0 "| | | | | |"  
And 1 "| | |P|A| |"  
And 2 "| | | | |B|"  
Then the player has reached the first goal

## Scenario: As a player has done the first goal and is next to their second goal, that goal is accomplished.

Given a game is in phase "gathering"  
And the player is at position 3,2 named "P"  
And a player named "C"  
And a player named "D"  
And the board looks as:  
And 0 "| | | |C| |"  
And 1 "| | | | |D|"  
And 2 "| | | |P| |"  
When the facilitator starts the assignments  
Then player named "P" has two goals "C" and "D"  
When all players has done their estimations  
And the facilitator starts the game  
And the player moves in direction "up"  
Then the player has reached the first goal  
And the player has reached the second goal  
And the board should look like:  
And 0 "| | | |C| |"  
And 1 "| | | |P|D|"  
And 2 "| | | | | |"

## Scenario: When a player has done their two goals and returned to the starting position, they are done.

Given a game is in phase "gathering"  
And the player is at position 3,2 named "P"  
And a player named "A"  
And a player named "B"  
And the board looks as:  
And 0 "| | | |A| |"  
And 1 "| | | | |B|"  
And 2 "| | | |P| |"  
When the facilitator starts the assignments  
Then player named "P" has two goals "A" and "B"  
When all players has done their estimations  
And the facilitator starts the game  
And the player moves in direction "up"  
And the player moves in direction "down"  
Then the player is done  
And the board should look like:  
And 0 "| | | |A| |"  
And 1 "| | | | |B|"  
And 2 "| | | |P| |"  
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# Feature: Game Flow

The game has the following phases: gathering, assignment, executing and reporting. A game is created when someone chose to facilitate. The game starts in phase gathering. During the gathering, the game waits for the players to gather.

The facilitator decides when enough have gathered by initiating assignment. where the game assigns each player two other players as their goals.

On the initiative of the facilitator, the execution phase is started. The execution phase is when the players try to reach their targets and return to their starting position.

When all players are done, the game automatically enters the reporting phase and the summary report is available.

## Scenario: Facilitator creates a new game

Given a user  
When the user chose to facilitate a game  
Then the user gets the role "facilitator"  
And the game is in phase "gathering"

## Scenario: Player joins a game

Given a game is in phase "gathering"  
And a user  
When the user chose to join the game  
Then the user gets the role "player"

## Scenario: Facilitator starts the assignment

Given a game is in phase "gathering"  
When the facilitator starts the assignments  
Then the game is in phase "assignment"

## Scenario: A game in phase assignment is started

Given a game is in phase "assignment"  
And a player named "Bertram"  
And "Bertram" has done their estimation  
When the facilitator starts the game  
Then the game is in phase "executing"

## Scenario: Players are all done

Given a game is in phase "executing"  
And there are 10 players in the game  
When all players of the game has reached their end goal  
Then the game is in phase "reporting"  
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# Feature: Player movement rules

A game that is on phase execution allows the player to move across the board. The player can not move off the board or move to a square that is occupied by another player.

Players can only move when the game is in the execution phase.

## Scenario: Player move within the board

Given a board with dimensions 5,3  
And the player is at position 3,1 named "P"  
And the board should look like:  
And 0 "| | | | | |"  
And 1 "| | | |P| |"  
And 2 "| | | | | |"  
When the player moves in direction "up"  
Then the player is on position 3,0  
And the board should look like:  
And 0 "| | | |P| |"  
And 1 "| | | | | |"  
And 2 "| | | | | |"

## Scenario: Player can't move to an occupied square

Given a board with dimensions 5,3  
And the player is at position 0,0 named "P"  
And a player named "A"  
And the board looks as:  
And 0 "|P| | | | |"  
And 1 "|A| | | | |"  
And 2 "| | | | | |"  
When the player moves in direction "down"  
Then the player is on position 0,0  
And the board should look like:  
And 0 "|P| | | | |"  
And 1 "|A| | | | |"  
And 2 "| | | | | |"

## Scenario: Player at the bottom edge of the board

Given a board with dimensions 5,3  
And the player is at position 1,2 named "P"  
And the board looks as:  
And 0 "| | | | | |"  
And 1 "| | | | | |"  
And 2 "| |P| | | |"  
When the player moves in direction "down"  
Then the board should look like:  
And 0 "| | | | | |"  
And 1 "| | | | | |"  
And 2 "| |P| | | |"

## Scenario: Player at the top edge of the board

Given a board with dimensions 5,3  
And the player is at position 1,0 named "P"  
And the board looks as:  
And 0 "| |P| | | |"  
And 1 "| | | | | |"  
And 2 "| | | | |"  
When the player moves in direction "up"  
Then the board should look like:  
And 0 "| |P| | | |"  
And 1 "| | | | | |"  
And 2 "| | | | | |"

## Scenario: Player tries to move during assignment phase.

Given a game is in phase "assignment"  
And the player is at position 1,1  
When the player moves in direction "up"  
Then the player is on position 1,1

# Feature: Player's Goals State

A player has three goals. Reach two other players and return to their starting position. These goals have four states each: no goal set, assigned, estimated and accomplished.

A goal state could be visualised as a bar with three slots that are filled depending on how far the player has come. OOO = no goal set, XOO = assigned, XXO = estimated and XXX = accomplished.

This gives a quick overview over each players progress.

## Scenario: Player is assigned a first goal

Given a game is in phase "gathering"  
And a player named "Alice"  
And a player named "Bertram"  
And a player named "Cecil"  
And the player named "Alice" first goal is in state "no goal set"  
When the facilitator starts the assignments  
Then the player named "Alice" first goal is in state "assigned"  
And the player named "Alice" second goal is in state "assigned"  
And the player named "Alice" end goal is in state "assigned"

## Scenario: Player has estimated their goals

Given a game is in phase "assignment"  
And a player named "Bertram"  
When "Bertram" has done their estimation  
Then the player named "Bertram" first goal is in state "estimated"  
And the player named "Bertram" second goal is in state "estimated"  
And the player named "Bertram" end goal is in state "estimated"

# About this document

This was created by copy and paste from the executed specifications.