

Contract CO1: newGame

Operation: newGame(level: Level)

Cross References: Use Cases: UC1 – StartGame

Preconditions:

- The start game menu must be initialized.
- A level is selected.

Postconditions:

- A new game of the given level is initialized and shown.
- The saved game is overwritten by the current game.

Contract CO2: selectLokum

Operation: selectLokum(position: Position)

Cross References: Use Cases: UC2 – SwapLokums

Preconditions:

- The game must be initialized.
- The first Lokum lokum1 has not been set yet.

Postconditions:

- lokum1 is set to the Lokum whose position is given.
- An indication for selected Lokum is shown to user.

Contract CO3: deselectLokum

Operation: deselectLokum()

Cross References: Use Cases: UC2 – SwapLokums

Preconditions:

- The game must be initialized.
- The first Lokum lokum1 must be set with selectLokum(position: Position) already.

Postconditions:

- lokum1 as the first chosen Lokum is unset.
- The indication for lokum1 is removed.

Contract CO4: swapWith

Operation: swapWith(position: Position)

Cross References: Use Cases: UC2 – SwapLokums

Preconditions:

- The game must be initialized.
- The first Lokum lokum1 must be chosen with selectLokum(position: Position) already.

Postconditions:

- If lokum1 and the Lokum at the given position are consecutive and swap forms a triplet, a quatruplet or a quintuplet:
 - lokum1 and the Lokum at the given position are swapped.
 - Game.movesLeft is decremented by one.
 - lokum1 as the first chosen Lokum is unset.
- If lokum1 and the Lokum at the given position are not consecutive or swap does not form a triplet, a quatruplet or a quintuplet:
 - A warning indicating two Lokums are unswappable is shown.
 - lokum1 as the first chosen Lokum is unset.

Contract C05: testSwap

Operation: testSwap (position1: Position, position2: Position)

Cross References: Use Cases: UC2 – SwapLokums
UC3 – SpecialSwapLokums

Preconditions:

- The game must be initialized.
- The first and the second Lokums lokum1 and lokum2 must be chosen already.

Postconditions:

- If lokum1 and lokum2 are valid and consecutive and the swap of those Lokums forms at least one triplet:
 - Returns true
- else
 - Returns false

Contract C06: saveCurrentState

Operation: saveCurrentState (gamePath : String)

Cross References: Use Cases: UC4 – SaveGame

Preconditions:

- The game must be initialized.

Postconditions:

- In the Player's folder, a new XML file containing the current state of the game named the given string gamePath is created.

Contract C07: createLoadedGame

Operation: createLoadedGame (player : Player, path : String)

Cross References: Use Cases: UC1 – StartGame

Preconditions:

- The XML file named path.xml in the folder named player must exist.

Postconditions:

- A new game with the saved board state, the saved score, the saved level number, the saved number of moves left is initialized.