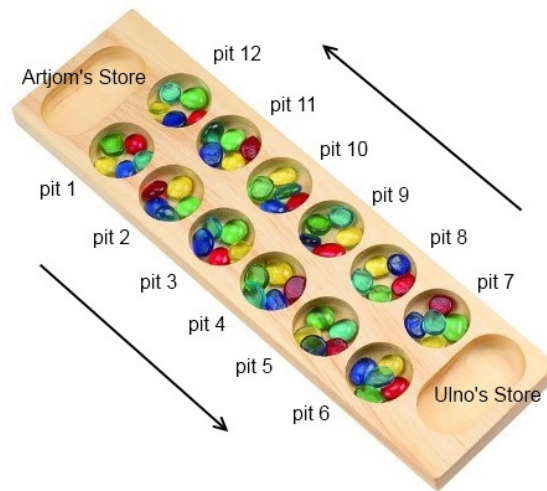


Mancala: User stories

Pre-precondition: Ulno and Artjom are playing Mancala. The game board looks like presented below.



Casual User Stories

1.

Title: Ulno makes a move from pit 1

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 1, pit 8 – 1, pit 9 – 3, pit 10 – 0, pit 11 – 0, pit 12 – 10. There are 15 seeds in Ulno's store and 5 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (1) from pit 1 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 1, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 1, pit 8 – 1, pit 9 – 3, pit 10 – 0, pit 11 – 0, pit 12 – 10. There are 15 seeds in Ulno's store and 5 seeds in Artjom's store. It is Artjom's turn to make a move.

2.

Title: Ulno makes a move from pit 2

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 4, pit 2 – 1, pit 3 – 4, pit 4 – 6, pit 5 – 0, pit 6 – 0, pit 7 – 2, pit 8 – 7, pit 9 – 0, pit 10 – 1, pit 11 – 1, pit 12 – 3. There are 3 seeds in Ulno's store and 4 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (1) from pit 2 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 4, pit 2 – 0, pit 3 – 5, pit 4 – 6, pit 5 – 0, pit 6 – 0, pit 7 – 2, pit 8 – 7, pit 9 – 0, pit 10 – 1, pit 11 – 1, pit 12 – 3. There are 3 seeds in Ulno's store and 4 seeds in Artjom's store. It is Artjom's turn to make a move.

3.

Title: Ulno makes a move from pit 3

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 1, pit 3 – 3, pit 4 – 0, pit 5 – 6, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 1, pit 11 – 1, pit 12

– 1. There are 10 seeds in Ulno's store and 12 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (3) from pit 3 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 1, pit 3 – 0, pit 4 – 1, pit 5 – 7, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 1, pit 11 – 1, pit 12 – 1. There are 10 seeds in Ulno's store and 12 seeds in Artjom's store. It is Artjom's turn to make a move.

4.

Title: Ulno makes a move from pit 4

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 1, pit 3 – 0, pit 4 – 1, pit 5 – 7, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 2, pit 12 – 1. There are 10 seeds in Ulno's store and 12 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (1) from pit 4 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 1, pit 3 – 0, pit 4 – 0, pit 5 – 8, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 2, pit 12 – 1. There are 10 seeds in Ulno's store and 12 seeds in Artjom's store. It is Artjom's turn to make a move.

5.

Title: Ulno makes a move from pit 5

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 7, pit 4 – 6, pit 5 – 4, pit 6 – 0, pit 7 – 0, pit 8 – 1, pit 9 – 2, pit 10 – 6, pit 11 – 6, pit 12 – 0. There are 1 seeds in Ulno's store and 3 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (4) from pit 5 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 7, pit 4 – 6, pit 5 – 0, pit 6 – 1, pit 7 – 1, pit 8 – 2, pit 9 – 2, pit 10 – 6, pit 11 – 6, pit 12 – 0. There are 2 seeds in Ulno's store and 3 seeds in Artjom's store. It is Artjom's turn to make a move.

6.

Title: Ulno makes a move from pit 6

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 2, pit 3 – 8, pit 4 – 0, pit 5 – 0, pit 6 – 3, pit 7 – 0, pit 8 – 1, pit 9 – 3, pit 10 – 1, pit 11 – 9, pit 12 – 0. There are 4 seeds in Ulno's store and 5 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (3) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 2, pit 3 – 8, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 1, pit 8 – 2, pit 9 – 3, pit 10 – 1, pit 11 – 9, pit 12 – 0. There are 5 seeds in Ulno's store and 5 seeds in Artjom's store. It is Artjom's turn to make a move.

7.

Title: Artjom makes a move from pit 7

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 6, pit 7 – 1, pit 8 – 1, pit 9 – 2, pit 10 – 2, pit 11 – 5, pit 12 – 5. There are 6 seeds in Ulno's store and 8 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (1) from pit 7 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 6, pit 7 – 0, pit 8 – 2, pit 9 – 2, pit 10 – 2, pit 11 – 5, pit 12 – 5. There are 6 seeds in Ulno's store and 8 seeds in Artjom's store. It is Ulno's turn to make a move.

8.

Title: Artjom makes a move from pit 8

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 7, pit 7 – 0, pit 8 – 2, pit 9 – 6, pit 10 – 5, pit 11 – 4, pit 12 – 4. There are 2 seeds in Ulno's store and 6 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (2) from pit 8 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 7, pit 7 – 0, pit 8 – 0, pit 9 – 7, pit 10 – 6, pit 11 – 4, pit 12 – 4. There are 2 seeds in Ulno's store and 6 seeds in Artjom's store. It is Ulno's turn to make a move.

9.

Title: Artjom makes a move from pit 9

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 4, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 2, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 16 seeds in Ulno's store and 13 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (2) from pit 9 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 4, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 1, pit 11 – 1, pit 12 – 0. There are 16 seeds in Ulno's store and 13 seeds in Artjom's store. It is Ulno's turn to make a move.

10.

Title: Artjom makes a move from pit 10

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 2, pit 2 – 1, pit 3 – 3, pit 4 – 6, pit 5 – 0, pit 6 – 2, pit 7 – 1, pit 8 – 7, pit 9 – 6, pit 10 – 4, pit 11 – 0, pit 12 – 0. There are 2 seeds in Ulno's store and 2 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (4) from pit 10 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 3, pit 2 – 1, pit 3 – 3, pit 4 – 6, pit 5 – 0, pit 6 – 2, pit 7 – 1, pit 8 – 7, pit 9 – 6, pit 10 – 0, pit 11 – 1, pit 12 – 1. There are 2 seeds in Ulno's store and 3 seeds in Artjom's store. It is Ulno's turn to make a move.

11.

Title: Artjom makes a move from pit 11

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 1, pit 4 – 5, pit 5 – 4, pit 6 – 4, pit 7 – 0, pit 8 – 4, pit 9 – 4, pit 10 – 4, pit 11 – 3, pit 12 – 3. There are 0 seeds in Ulno's store and 0 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (3) from pit 11 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 4, pit 3 – 1, pit 4 – 5, pit 5 – 4, pit 6 – 4, pit 7 – 0, pit 8 – 4, pit 9 – 4, pit 10 – 4, pit 11 – 0, pit 12 – 4. There are 0 seeds in Ulno's store and 1 seeds in Artjom's store. It is Ulno's turn to make a move.

12.

Title: Artjom makes a move from pit 12

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 0, pit 4 – 2, pit 5 – 0, pit 6 – 2, pit 7 – 0, pit 8 – 2, pit 9 – 3, pit 10 – 7, pit 11 – 6, pit 12 – 6. There are 4 seeds in Ulno's store and 0 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (6) from pit 12 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 5, pit 3 – 1, pit 4 – 3, pit 5 – 1, pit 6 – 2, pit 7 – 0, pit 8 – 2, pit 9 – 3, pit 10 – 7, pit 11 – 6, pit 12 – 0. There are 4 seeds in Ulno's store and 1 seeds in Artjom's store. It is Ulno's turn to make a move.

New Turn User Stories

13.

Title: Ulno makes a move from pit 2 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 5, pit 3 – 0, pit 4 – 2, pit 5 – 1, pit 6 – 6, pit 7 – 4, pit 8 – 0, pit 9 – 0, pit 10 – 1, pit 11 – 1, pit 12 – 6. There are 8 seeds in Ulno's store and 2 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (5) from pit 2 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Ulno's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 1, pit 4 – 3, pit 5 – 2, pit 6 – 7, pit 7 – 4, pit 8 – 0, pit 9 – 0, pit 10 – 1, pit 11 – 1, pit 12 – 6. There are 9 seeds in Ulno's store and 2 seeds in Artjom's store. It is Ulno's turn to make a move.

14.

Title: Ulno makes a move from pit 3 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 4, pit 4 – 1, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 2, pit 9 – 3, pit 10 – 7, pit 11 – 6, pit 12 – 6. There are 3 seeds in Ulno's store and 0 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (4) from pit 3 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Ulno's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 0, pit 4 – 2, pit 5 – 1, pit 6 – 1, pit 7 – 0, pit 8 – 2, pit 9 – 3, pit 10 – 7, pit 11 – 6, pit 12 – 6. There are 4 seeds in Ulno's store and 0 seeds in Artjom's store. It is Ulno's turn to make a move.

15.

Title: Ulno makes a move from pit 5 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 2, pit 6 – 7, pit 7 – 0, pit 8 – 0, pit 9 – 1, pit 10 – 2, pit 11 – 1, pit 12 – 6. There are 8 seeds in Ulno's store and 9 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (2) from pit 5 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Ulno's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 8, pit 7 – 0, pit 8 – 0, pit 9 – 1, pit 10 – 2, pit 11 – 1, pit 12 – 6. There are 9 seeds in Ulno's store and 9 seeds in Artjom's store. It is Ulno's turn to make a move.

16.

Title: Ulno makes a move from pit 6 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 5, pit 5 – 0, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 4, pit 10 – 1, pit 11 – 0, pit 12 – 0. There are 14 seeds in Ulno's store and 11 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (1) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Ulno's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 5, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 4, pit 10 – 1, pit 11 – 0, pit 12 – 0. There are 15 seeds in Ulno's store and 11 seeds in Artjom's store. It is Ulno's turn to make a move.

17.

Title: Artjom makes a move from pit 8 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 0, pit 4 – 3, pit 5 – 3, pit 6 – 0, pit 7 – 0, pit 8 – 5, pit 9 – 1, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 12 seeds in Ulno's store and 11 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (5) from pit 8 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Artjom's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 0, pit 4 – 3, pit 5 – 3, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 2, pit 10 – 1, pit 11 – 1, pit 12 – 1. There are 12 seeds in Ulno's store and 12 seeds in Artjom's store. It is Artjom's turn to make a move.

18.

Title: Artjom makes a move from pit 9 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 2, pit 6 – 7, pit 7 – 0, pit 8 – 1, pit 9 – 4, pit 10 – 1, pit 11 – 0, pit 12 – 5. There are 8 seeds in Ulno's store and 8 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (4) from pit 9 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Artjom's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 2, pit 6 – 7, pit 7 – 0, pit 8 – 1, pit 9 – 0, pit 10 – 2, pit 11 – 1, pit 12 – 6. There are 8 seeds in Ulno's store and 9 seeds in Artjom's store. It is Artjom's turn to make a move.

19.

Title: Artjom makes a move from pit 10 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 3, pit 11 – 1, pit 12 – 11. There are 15 seeds in Ulno's store and 5 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (3) from pit 10 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Artjom's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 2, pit 12 – 12. There are 15 seeds in Ulno's store and 6 seeds in Artjom's store. It is Artjom's turn to make a move.

20.

Title: Artjom makes a move from pit 11 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 2, pit 12 – 12. There are 15 seeds in Ulno's store and 6 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (2) from pit 11 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Artjom's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 13. There are 15 seeds in Ulno's store and 7 seeds in Artjom's store. It is Artjom's turn to make a move.

21.

Title: Artjom makes a move from pit 12 and gets a new move

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 0, pit 4 – 3, pit 5 – 3, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 2, pit 10 – 1, pit 11 – 1, pit 12 – 1. There are 12 seeds in Ulno's store and 12 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (1) from pit 12 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in the Artjom's own store so he gets another move.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 0, pit 4 – 3, pit 5 – 3, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 2, pit 10 – 1, pit 11 – 1, pit 12 – 0. There are 12 seeds in Ulno's store and 13 seeds in Artjom's store. It is Artjom's turn to make a move.

Capturing User Stories

22.

Title: Ulno makes a move from pit 1 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 2, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 1, pit 9 – 1, pit 10 – 3, pit 11 – 2, pit 12 – 4. There are 12 seeds in Ulno's store and 11 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (2) from pit 1 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 3, so the player takes this last seed and all the seeds (3) from the adjacent opponent's pit 10 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 1, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 1, pit 9 – 1, pit 10 – 0, pit 11 – 2, pit 12 – 4. There are 16 seeds in Ulno's store and 11 seeds in Artjom's store. It is Artjom's turn to make a move.

23.

Title: Ulno makes a move from pit 2 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 2, pit 3 – 1, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 1, pit 9 – 1, pit 10 – 0, pit 11 – 2, pit 12 – 0. There are 16 seeds in Ulno's store and 12 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (2) from pit 2 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 4, so the player takes this last seed and all the seeds (1) from the adjacent opponent's pit 9 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 2, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 1, pit 9 – 0, pit 10 – 0, pit 11 – 2, pit 12 – 0. There are 18 seeds in Ulno's store and 12 seeds in Artjom's store. It is Artjom's turn to make a move.

24.

Title: Ulno makes a move from pit 3 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 2, pit 2 – 0, pit 3 – 1, pit 4 – 0, pit 5 – 0, pit 6 – 1, pit 7 – 3, pit 8 – 0, pit 9 – 6, pit 10 – 2, pit 11 – 2, pit 12 – 4. There are 4 seeds in Ulno's store and 11 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (1) from pit 3 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 4, so the player takes this last seed and all the seeds (6) from the adjacent opponent's pit 9 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 2, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 1, pit 7 – 3, pit 8 – 0, pit 9 – 0, pit 10 – 2, pit 11 – 2, pit 12 – 4. There are 11 seeds in Ulno's store and 11 seeds in Artjom's store. It is Artjom's turn to make a move.

25.

Title: Ulno makes a move from pit 4 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 0, pit 4 – 2, pit 5 – 3, pit 6 – 0, pit 7 – 1, pit 8 – 0, pit 9 – 5, pit 10 – 1, pit 11 – 1, pit 12 – 2. There are 6 seeds in Ulno's store and 11 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (2) from pit 4 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 6, so the player takes this last seed and all the seeds (1) from the adjacent opponent's pit 7 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 0, pit 4 – 0, pit 5 – 4, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 5, pit 10 – 1, pit 11 – 1, pit 12

– 2. There are 8 seeds in Ulno's store and 11 seeds in Artjom's store. It is Artjom's turn to make a move.

26.

Title: Ulno makes a move from pit 5 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 10, pit 3 – 1, pit 4 – 0, pit 5 – 1, pit 6 – 0, pit 7 – 8, pit 8 – 0, pit 9 – 0, pit 10 – 1, pit 11 – 2, pit 12 – 1. There are 6 seeds in Ulno's store and 6 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (1) from pit 5 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 6, so the player takes this last seed and all the seeds (8) from the adjacent opponent's pit 7 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 10, pit 3 – 1, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 1, pit 11 – 2, pit 12 – 1. There are 15 seeds in Ulno's store and 6 seeds in Artjom's store. It is Artjom's turn to make a move.

27.

Title: Ulno makes a move from pit 6 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 10, pit 7 – 0, pit 8 – 0, pit 9 – 2, pit 10 – 2, pit 11 – 0, pit 12 – 7. There are 12 seeds in Ulno's store and 3 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (10) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 2, so the player takes this last seed and all the seeds (1) from the adjacent opponent's pit 11 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 1, pit 8 – 1, pit 9 – 3, pit 10 – 3, pit 11 – 0, pit 12 – 8. There are 15 seeds in Ulno's store and 4 seeds in Artjom's store. It is Artjom's turn to make a move.

28.

Title: Artjom makes a move from pit 7 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 4, pit 4 – 0, pit 5 – 4, pit 6 – 4, pit 7 – 3, pit 8 – 3, pit 9 – 0, pit 10 – 0, pit 11 – 4, pit 12 – 4. There are 5 seeds in Ulno's store and 1 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (3) from pit 7 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 10, so the player takes this last seed and all the seeds (4) from the adjacent opponent's pit 3 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 4, pit 3 – 0, pit 4 – 0, pit 5 – 4, pit 6 – 4, pit 7 – 0, pit 8 – 4, pit 9 – 1, pit 10 – 0, pit 11 – 4, pit 12 – 4. There are 5 seeds in Ulno's store and 6 seeds in Artjom's store. It is Ulno's turn to make a move.

29.

Title: Artjom makes a move from pit 8 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 4, pit 2 – 1, pit 3 – 5, pit 4 – 0, pit 5 – 1, pit 6 – 5, pit 7 – 5, pit 8 – 4, pit 9 – 0, pit 10 – 4, pit 11 – 4, pit 12 – 0. There are 2 seeds in Ulno's store and 1 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (4) from pit 8 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 12, so the player takes this last seed and all the seeds (4) from the adjacent opponent's pit 1 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 1, pit 3 – 5, pit 4 – 0, pit 5 – 1, pit 6 – 5, pit 7 – 5, pit 8 – 0, pit 9 – 1, pit 10 – 5, pit 11 – 5, pit 12

– 0. There are 2 seeds in Ulno's store and 6 seeds in Artjom's store. It is Ulno's turn to make a move.

30.

Title: Artjom makes a move from pit 10 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 5, pit 3 – 1, pit 4 – 0, pit 5 – 10, pit 6 – 0, pit 7 – 2, pit 8 – 2, pit 9 – 4, pit 10 – 1, pit 11 – 0, pit 12 – 3. There are 3 seeds in Ulno's store and 4 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (1) from pit 10 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 11, so the player takes this last seed and all the seeds (5) from the adjacent opponent's pit 2 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 1, pit 4 – 0, pit 5 – 10, pit 6 – 0, pit 7 – 2, pit 8 – 2, pit 9 – 4, pit 10 – 0, pit 11 – 0, pit 12 – 3. There are 3 seeds in Ulno's store and 10 seeds in Artjom's store. It is Ulno's turn to make a move.

31.

Title: Artjom makes a move from pit 11 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 8, pit 3 – 0, pit 4 – 1, pit 5 – 5, pit 6 – 0, pit 7 – 7, pit 8 – 0, pit 9 – 0, pit 10 – 6, pit 11 – 1, pit 12 – 0. There are 4 seeds in Ulno's store and 3 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (1) from pit 11 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 12, so the player takes this last seed and all the seeds (1) from the adjacent opponent's pit 1 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 8, pit 3 – 0, pit 4 – 1, pit 5 – 5, pit 6 – 0, pit 7 – 7, pit 8 – 0, pit 9 – 0, pit 10 – 6, pit 11 – 0, pit 12 – 0. There are 4 seeds in Ulno's store and 5 seeds in Artjom's store. It is Ulno's turn to make a move.

32.

Title: Artjom makes a move from pit 12 and steals opponent's seeds

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 13. There are 15 seeds in Ulno's store and 7 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (13) from pit 12 and moves counter-clockwise, dropping one seed into each successive pit. The last seed lands in an empty pit 11, so the player takes this last seed and all the seeds (1) from the adjacent opponent's pit 2 and places them in his store.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 0, pit 3 – 1, pit 4 – 1, pit 5 – 1, pit 6 – 2, pit 7 – 1, pit 8 – 1, pit 9 – 1, pit 10 – 1, pit 11 – 0, pit 12 – 0. There are 16 seeds in Ulno's store and 10 seeds in Artjom's store. It is Ulno's turn to make a move.

Winning / Loosing User Stories

33.

Title: Artjom wins the game

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 2, pit 7 – 0, pit 8 – 2, pit 9 – 4, pit 10 – 0, pit 11 – 1, pit 12 – 0. There are 16 seeds in Ulno's store and 11 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (2) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 17 seeds in Ulno's store and 19 seeds in Artjom's store. Artjom wins the game.

34.

Title: Artjom wins the game

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 6, pit 7 – 0, pit 8 – 2, pit 9 – 2, pit 10 – 2, pit 11 – 5, pit 12 – 5. There are 6 seeds in Ulno's store and 8 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (6) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 7 seeds in Ulno's store and 29 seeds in Artjom's store. Artjom wins the game.

35.

Title: Artjom wins the game

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 7, pit 7 – 0, pit 8 – 0, pit 9 – 7, pit 10 – 6, pit 11 – 4, pit 12 – 4. There are 2 seeds in Ulno's store and 6 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (7) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 3 seeds in Ulno's store and 33 seeds in Artjom's store. Artjom wins the game.

36.

Title: Artjom wins the game

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 7, pit 7 – 0, pit 8 – 2, pit 9 – 1, pit 10 – 1, pit 11 – 7, pit 12 – 6. There are 6 seeds in Ulno's store and 6 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (7) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 7 seeds in Ulno's store and 29 seeds in Artjom's store. Artjom wins the game.

37.

Title: Artjom wins the game

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 8, pit 7 – 0, pit 8 – 0, pit 9 – 1, pit 10 – 2, pit 11 – 1, pit 12

– 6. There are 9 seeds in Ulno's store and 9 seeds in Artjom's store. It is Ulno's turn to make a move.

Action: Ulno picks up all the seeds (8) from pit 6 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 10 seeds in Ulno's store and 26 seeds in Artjom's store. Artjom wins the game.

38.

Title: Ulno wins the game

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 2, pit 5 – 2, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 1. There are 17 seeds in Ulno's store and 14 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (1) from pit 12 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 21 seeds in Ulno's store and 15 seeds in Artjom's store. Ulno wins the game.

39.

Title: Ulno wins the game

Preconditions: The pits on the gaming board contain the following amount of seeds: pit 1 – 1, pit 2 – 1, pit 3 – 0, pit 4 – 0, pit 5 – 8, pit 6 – 1, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 2. There are 10 seeds in Ulno's store and 13 seeds in Artjom's store. It is Artjom's turn to make a move.

Action: Artjom picks up all the seeds (2) from pit 12 and moves counter-clockwise, dropping one seed into each successive pit.

Postcondition: The pits on the gaming board contain the following amount of seeds: pit 1 – 0, pit 2 – 0, pit 3 – 0, pit 4 – 0, pit 5 – 0, pit 6 – 0, pit 7 – 0, pit 8 – 0, pit 9 – 0, pit 10 – 0, pit 11 – 0, pit 12 – 0. There are 22 seeds in Ulno's store and 14 seeds in Artjom's store. Ulno wins the game.

Drawing User Stories

40.

Title: Making a draw

Precondition: Artjom has two seeds in pit nr. 12 and 16 seeds in his store, Ulno has got one seed in pit nr. 6 and 17 seeds in his store. All the other pits are empty. It is Ulno's turn to move.

Action: Ulno takes the last seed from pit nr. 6 and places it in his store, Artjom moves the remaining two seeds into his own store.

Postcondition: All the pits are empty and both players' stores contain 18 seeds – the game ends in a draw.

41.

Title: Making a draw

Precondition: Ulno has two seeds in pit nr. 6 and 17 seeds in his store, Artjom has got one seed in pits nr. 7 and 8, 2 seeds in pit 11 and 13 seeds in his store. All the other pits are empty. It is Ulno's turn to move.

Action: Ulno picks up all 2 seeds from pit 6 and moves counter-clockwise, dropping one seed into each successive pit. Artjom moves all seeds from all his pits to his store.

Postcondition: All the pits are empty and both players' stores contain 18 seeds - the game ends in a draw.