

## **User Stories**

(Very concrete example of the problem to solve – assume the development project already exists)

- Whenever seeds are listed like 0,4,4,4,4,9 it means that the respective player has 0 seeds in his first pit, 4 in his second... and 9 in is last, listed in the direction the seeds are distributed (if not stated differently)
- The 'score' is the number of seeds in a player's Storage

### **User story 1**

Title: Game application is started

Precondition: Alice's computer is running and desktop is displayed with the Mancala app.

Alice and Bob are sitting in front of the computer.

Action: Alice double-clicks the Mancala app.

Postcondition: The application is opened and shows the empty gameboard. In the menu are the actions 'Start new game' and 'History'.

### **User story 2**

Title: Second game after winning is started

Precondition: Game between Alice and Bob has ended with Alice winning. On top of the gameboard is displayed a pop-up window saying "Congratulations. Alice has won the game with 27 points. Bob got 19 points." and containing button "Play again".

Action: Alice clicks on button "Play again".

Postcondition: The application displays the gameboard with newly set up pits, the player names are the same as in the previous game. As Alice won the last game, it's her turn.

### **User story 3**

Title: At Alice's turn, seeds are placed only to Alice's pits.

Precondition: Bob has 4 seeds in each of his pits and Alice has 4 seeds in each of her pits. Both have a score of 0. It's Alice's turn.

Action: Alice clicks on pit a1.

Postcondition: The numbers in pits a2, a3, a4 and a5 have increased by 1. Bob has 4 seeds in each of his pits. Alice has respectively 0, 5, 5, 5, 5 and 4 seeds in her pits. Both have a score of 0. It's Bob's turn.

### **User story 4**

Title: At Alice's turn, last seed reaches Alice's storage.

Precondition: Bob has 4 seeds in each of his pits and Alice has 4 seeds in each of her pits. Both have a score of 0. It's Alice's turn

Action: Alice clicks on pit a3.

Postcondition: The numbers in pits a4, a5, a6 and Alice's storage have increased by 1. Bob still has 4 seeds in each of his pits. Alice has respectively 4, 4, 0, 5, 5 and 5 seeds in her pits. Bob's score is 0 and Alice's 1. It's Alice's turn.

### **User story 5**

Title: At Alice's turn, last seed is placed to one of Bob's pits.

Precondition: Bob has 4 seeds in each of his pits and Alice has 4 seeds in each of her pits. Both have a score of 0. It's Alice's turn

Action: Alice clicks on pit a5.

Postcondition: The numbers in pits a6, Alice's storage and Bob's pits b1 and b2 have

increased by 1. Bob has respectively 4,4,4,4,5,5 seeds in pits b6 to b1. Alice has respectively 4,4,4,4,0,5 seeds in her pits. Bob's score is 0 and Alice's 1. It's Bob's turn.

### **User story 6**

Title: Alice selects one of Bob's pits

Precondition: The game has started. Bob has 4 seeds in each of his pits and Alice has 4 seeds in each of her pits. Both have a score of 0. It's Alice's turn.

Action: Alice clicks on Bob's pit b3. Nothing happens, because Bob's buttons are disabled while it is Alice's turn.

Postcondition: No change on the game board, it is still Alice's turn.

### **User story 7**

Title: Alice selects empty pit on her side

Precondition: Bob has 4 seeds in each of his pits and Alice has respectively 4,4,4,4,0,4 seeds in pits a1 to a6. Both have a score of 1. It's Alice's turn.

Action: Alice clicks on pit a5. Nothing happens, because 0 seeds can't be disseminated.

Postcondition: No change on the game board, it is still Alice's turn.

### **User story 8 is free, the one in Fujaba is invalid (covered by story 12)**

### **User story 9**

Title: At Alice's turn, last seed is placed to Alice's empty pit.

Precondition: Bob has 4 seeds in each of his pits and Alice has respectively 4,4,4,4,0,4 seeds in each of her pits. Both have a score of 0. It's Alice's turn

Action: Alice clicks on pit a1 and earns one seed from a5 and all 4 seeds from b2.

Postcondition: Alice has captured 5 seeds into her storage. Bob has 4,4,4,4,0,4 seeds in pits b6 to b1. Alice has respectively 0,5,5,5,0,4 seeds in her pits. Bob's score is 0 and Alice's 5. It's Bob's turn.

### **User story 10 ("Story Board 10")**

Title: At Alice's turn, last seed is placed to Alice's pit.

Precondition: Alice has respectively 1,3,4,4,4,8 seeds in pits a1 to a6. Bob has 0,5,5,5,5,4 in pits b6 to b1. Both have a score of 0. It's Alice's turn.

Action: Alice clicks on pit a6

Postcondition: The numbers in Alice's storage, Bob's pits b1 to b6 and Alice's pit a1 increase by 1. Bob has respectively 1,6,6,6,6,5 seeds in pits b6 to b1. Alice has respectively 2,3,4,4,4,0 seeds in pits a1 to a6. Bob's score is 0 and Alice's 1. It's Bob's turn.

### **User story 11**

Title: Bob wins the game

Precondition: Alice has respectively 0,0,0,0,0,1 seeds in pits a1 to a6 and a score of 15. Bob has respectively 2,0,4,3,2,1 seeds in pits b1 to b6 and a score of 20.

Action: Alice clicks on pit a6.

Postcondition: Alice has no seeds left in her pits so the game is over. Seeds in Bob's pits remain 2,0,4,3,2,1 b1 to b6. Alice has a score of 16 and Bob has 20. Bob is winner.

### **User Story 12**

Title: Game between Alice and Bob ends in draw

Precondition: Alice has respectively 0,0,0,0,0,1 seeds in pits a1 to a6 and a score of 19. Bob

has respectively 2,0,0,3,2,1 seeds in pits b1 to b6 and a score of 20.

Action: Alice clicks on pit a6.

Postcondition: The score of Alice has increased by one, but Alice has no seeds in her pits. So the game is over. The seeds in Bob's pits remain the same. Alice has a score of 20 and Bob has 20.

#### **User story #####**

Title: Alice starts first game

Precondition: The game application is running and empty gameboard with 'Start new game' and 'History' buttons is displayed. Alice and Bob are sitting in front of the computer.

Action: Alice clicks button "Start Game".

Postcondition: Pop-up box titled "Insert player names" and containing two text boxes for player names and buttons "OK" and "Cancel" is displayed on top of the gameboard.

#### **User story ###**

Title: Alice enters names of both players and presses "OK"

Precondition: Alice has clicked "Start game" button and sees pop-up box with option to insert player names

Action: Alice inserts 'Alice' as first player and 'Bob' as second player and presses 'OK'

Postcondition: The application shows the gameboard with filled pits and player names and it's Alice's turn.

#### **User story 4**

Title: Alice enters names of both players and presses "Cancel"

Precondition: Alice has clicked "Start game" button and sees pop-up box with option to insert player names

Action: Alice inserts 'Alice' as first player and 'Bob' as second player and presses 'Cancel'

Postcondition: The application shows the empty gameboard with buttons "Start game" and "History".

#### **User story 5**

Title: Alice enters name of only one player and presses "OK"

Precondition: Alice has clicked "Start game" button and sees pop-up box with option to insert player names

Action: Alice inserts 'Alice' as first player and leaves text box for second player empty. She then presses 'OK'

Postcondition: The application displays error message "You must enter names for both players to start the game" with button "OK".

#### **User story 14**

Title: Alice closes the game application and chooses "Ok"

Precondition: The game application is running and shows the empty gameboard with 'Start new game' and 'History' buttons. There is a red X button in the top right corner of the application window.

Action: Alice clicks on red X button. Confirmation box is displayed saying "Do you want to exit from this game?" and containing buttons "Ok" and "Cancel". Alice clicks on button "Ok".

Postcondition: The game application window is closed and computer's desktop is displayed.

#### **User story 15**

Title: Game turn changes from Alice to Bob

Precondition: Bob has 4 seeds in each of his pits. Alice has respectively 0, 5, 5, 5, 5, 4 seeds in her pits. Both have a score of 0. Alice last seed ended in her own pit.

Action: Alice's pits turn into gray and Bob's pits are highlighted. Status bar at the bottom of the window displays message "It's Bob's turn".

Postcondition: Bob's pits are highlighted and he clicks on pit b5 to make a move.

### **User story 16**

Title: Alice closes the game application and chooses "Cancel"

Precondition: Alice and Bob are currently playing a game. Bob has 4 seeds in each of his pits. Alice has respectively 0, 5, 5, 5, 5, 4 seeds in her pits. Both have a score of 0. It's Alice's turn.

Action: Alice clicks on red X button. Confirmation box is displayed saying "Do you want to exit from this game?" and containing buttons "Ok" and "Cancel". Alice clicks on button "Cancel".

Postcondition: Confirmation box disappears and Alice the same game state as in precondition is displayed and Alice is able to continue with her turn.

### **User story 17**

Title: Alice displays history window

Precondition: The game application is running and shows the empty gameboard with 'Start new game' and 'History' buttons.

Action: Alice clicks button "History" and new window titled "History" is displayed on top of the gameboard.

Postcondition: On top of the gameboard is window containing information about previous matches in a text box and titled "History".

### **User story 18**

Title: Alice views specific history about one game

Precondition: The game application is running and on top of the gameboard window titled "History" is displayed.

Action: Alice moves cursor inside the upper text box containing lines of timestamps and selects line saying "14.11.2010 16:30". In lower text box text saying " Alice 17p, Bob 21p. Bob won the game" is displayed.

Postcondition: Window titled "History" containing information about results of "14.11.2010 16:30" game is displayed.

### **User story 21**

Title: Alice closes "History" window

Precondition: The game application is running and on top of the gameboard window titled "History" is displayed. There is a red X button in the top right corner of the "History" window.

Action: Alice clicks on red X button and "History" window closes.

Postcondition: The game application is running and empty gameboard with 'Start new game' and 'History' buttons is displayed.