User Stories

User Story 1

Title: Opening Mancala environment for the first time
Precondition: Computer is working. Computer users Bob and Andy would like to play Mancala game for the first time.
Action:
• Bob finds the icon of Mancala game on Desktop
• Bob makes double click on the Mancala icon
Postcondition: Game window is opened and gaming environment is displayed. There Bob and Andy see the board, which consist 2 large cup – i.e. Stores and 12 small pits that contain 4 stones each. Its also indicated which 6 pits belong to Bob and which 6 pits at the opponent side to Andy. Application is waiting for Bob decision to "Start" a game or get "Help".

User Story 2

Title: Learning how to play Mancala
Precondition: Game window is opened and gaming environment is displayed. There Bob and Andy see the board, which consist 2 large cup – i.e. Stores and 12 small pits that contain 4 stones each. Its also indicated which 6 pits belong to Bob and which 6 pits at the opponent side to Andy. Application is waiting for Bob confirmation to get "Help".
Action:
• Bob pushes the "Help" button
Postcondition: Small window with text is opened in the middle of the gaming environment.
 There is instruction about how to play Mancala game. Bob and Andy read the rules.

User Story 3

Title: Starting Mancala game for the first time
Precondition: Game window is opened and gaming environment is displayed. There Bob and Andy see the board, which consist 2 large cup – i.e. Stores and 12 small pits that contain 4 stones each. Its also indicated which 6 pits belong to Bob and which 6 pits at the opponent side to Andy. Application is waiting for Bob confirmation to start a game.
Action:
• Bob pushes the "Start" button
Postcondition: Bob and Andy see the same board, which consist 2 large cup – i.e. Stores and 12 small pits that contain 4 stones each. Its also indicated which 6 pits belong to Bob and which 6 pits at the opponent side to Andy. Application is waiting for Bob first move – Bob have to select the pit with stones on his side.

User Story 4

Title: Bob gets 1 captured stone by the first move

Precondition: Mancala game is started and game environment is displayed. The game environment consists of a board with 2 empty stores (i.e. Mancalas or large pits) and 12 small pits that contain 4 stones each. It is also indicated which pits belong to Bob and which to Andy, and that it is currently Bob's turn. Bob is offered by the application to select a pit on his side and application is waiting for him to click on one of the small pit.

Action:
• Bob selects pit 3b on his side.
• The stones go one by one into every next pit.
• One stone falls to Bob's store.
• The last stone falls to Andy's first pit.

Postcondition: Bob's stone layout is 4, 4, 4, 0, 5, 5. Bob's store has 1 stone in it. Andy's stone layout is 5, 4, 4, 4, 4, 4. Andy's store has 0 stones in it. It's Andy's turn.

User Story 5

Title: Andy gets free turn

Precondition: Bob's stone layout is 4, 4, 4, 0, 5, 5 Andy's stone layout is 5, 4, 4, 4, 4, 4. Andy's store has 0 stones in it. It's Andy's turn.

Action:
- Andy selects pit 4a on his side.
- The stones go one by one into every next pit.
- The last stone falls to Andy's store.
- Andy gets free turn.

Postcondition: Bob's stone layout is 4, 4, 4, 0, 5, 5. Bob's store has 1 stone in it. Andy's stone layout is 5, 4, 0, 5, 5, 5. Andy's store has 1 stone in it. It's Andy's turn.

User Story 6

Title: Andy plays his free turn

Precondition: Bob's stone layout is 4, 4, 4, 0, 5, 5. Bob's store has 1 stone in it. Andy's stone layout is 5, 4, 0, 5, 5, 5. Andy's store has 1 stone in it. It's Andy's turn.

Action:
- Andy selects pit 5a on his side.
- The stones go one by one into every next pit.
- The last stone falls to Andy's pit 1a.

Postcondition: Bob's stone layout is 4, 4, 4, 0, 5, 5. Bob's store has 1 stone in it. Andy's stone layout is 5, 0, 1, 6, 6, 6. Andy's store has 1 stone in it. It's Bob's turn.

User Story 7

Title: Stuffing the opposite pit

Precondition: Bob's stone layout is 4, 4, 0, 1, 0, 7. Bob's store has 3 stones in it. Andy's stone layout is 6, 1, 2, 7, 6, 6. Andy's store has 1 stone in it. Bob is hoping to get to pit 2b in his next turn to capture Andy's stones from pit 5a. It's Andy's turn.

Action:

- Andy selects pit 6a on his side.
- The stones go one by one into Andy's every pit.
- Last stone falls into Andy's store, Andy gets free turn.
- Andy selects pit 1a.
- First stone falls into Andy's store.
- Other stones go one by one into Bob's every pit.

Postcondition: Bob's stone layout is 5, 5, 1, 2, 1, 8. Bob's store has 3 stones in it. Andy's stone layout is 0, 2, 3, 8, 7, 0. Andy's store has 3 stones in it. It's Bob's turn and he hasn't got chance to capture Andy's stones.

User Story 8

Title: Capturing opponent's stones

Precondition: Bob's stone layout is 5, 0, 2, 0, 0, 11. Bob's store has 6 stones in it. Andy's stone layout is 1, 2, 3, 8, 7, 0. Andy's store has 3 stones in it. It's Andy's turn.

Action:

- Andy selects pit 4a on his side.
- The stones go one by one into every next pit.
- The last stone falls to Andy's empty pit 1a.
- The stone from Andy's pit 1a and stones from Bob's opposite 6b pit go to Andy's store.

Postcondition: Bob's stone layout is 0, 0, 2, 0, 0, 11. Bob's store has 6 stones in it. Andy's stone layout is 1, 2, 0, 9, 8, 0. Andy's store has 9 stones in it. It's Bob's turn.

User Story 9

Title: Skipping opponent's store

Precondition: Bob's stone layout is 0, 0, 0, 1, 0, 11. Bob's store has 9 stones in it. Andy's stone layout is 0, 1, 0, 9, 8, 0. Andy's store has 9 stones in it. It's Bob's turn.

Action:

- Bob selects pit 1b from his side.
- First stone falls to Bob's store.
- The stones go one by one into Andy's every pit.
- No stone falls into Andy's store, it's skipped.
- The stones go one by one into Bob's every next pit.
- The last stone falls to Bob's pit 3b.

Postcondition: Bob's stone layout is 1, 1, 1, 2, 0, 0. Bob's store has 10 stones in it. Andy's stone layout is 1, 2, 1, 10, 9, 1. Andy's store has 9 stones in it. It's Andy's turn.

User Story 10

Title: Hoarding stones in the pit

Precondition: Bob's stone layout is 1, 1, 1, 0, 1, 0. Bob's store has 12 stones in it. Andy's stone layout is 0, 2, 0, 11, 9, 0. Andy's store has 10 stones in it. It's Andy's turn.

Action:
- Andy selects pit 5a from his side.
- First stone falls in Andy's pit 4a.
- Second stone falls into Andy's pit 3a.

Postcondition: Bob's stone layout is 1, 1, 1, 0, 1, 0. Bob's store has 12 stones in it. Andy's stone layout is 0, 0, 1, 12, 9, 0. Andy's store has 10 stones in it. It's Bob's turn.

User Story 11

Title: Andy captures three stones from his pit

Precondition: Bob's stone layout is 1, 1, 0, 0, 1, 0. Bob's store has 14 stones in it. Andy's stone layout is 0, 0, 0, 12, 9, 0. Andy's store has 10 stones in it. It's Andy's turn.

Action:
- Andy selects pit 2a from his side.
- First stone falls in Andy's pit 1a.
- Second stone falls into Andy's store.
- The stones go one by one into Bob's every next pit, skipping the Bob's store.
- The last stone falls into Andy's pit 6a.
- The stone from Andy's pit 6a and stone from Bob's opposite pit 1b go to Andy's store.

Postcondition: Bob's stone layout is 2, 2, 1, 1, 2, 0. Bob's store has 14 stones in it. Andy's stone layout is 0, 0, 0, 12, 0, 1. Andy's store has 13 stones in it. It's Bob's turn.

User Story 12

Title: Andy captures Bob's stones, Bob's stones end and Andy wins the game

Precondition: Bob's stone layout is 0, 0, 0, 0, 1, 0. Bob's store has 21 stones in it. Andy's stone layout is 1, 0, 0, 1, 0, 0. Andy's store has 24 stones in it. It's Andy's turn.

Action:
- Andy selects pit 6a from his side.
- Stone falls in Andy's pit 5a.
- The stone from Andy's pit 5a and stone from Bob's opposite pit 2b go to Andy's store.
- There are no more stones on Bob's side and game ends, Andy win the game
- Scores of both players are counted by the program and displayed.

Postcondition: Bob's stone layout is 0, 0, 0, 0, 0, 0. Bob's store has 21 stones in it. Andy's stone layout is 0, 0, 0, 1, 0, 0. Andy's store has 26 stones in it. Game ends. All pits are inactive. Players can't make any more moves. Stone layout doesn't change. In the middle of the gaming environment is displayed Bob and Andy final count of the stones. Bob's score is 21, Andy's score is 27. It is displayed that Andy is winner of the game.

User Story 13

Title: Bob makes the last move, capturing all remaining Andy's stones, Andy wins the game
Precondition: Bob's stone layout is 1, 0, 0, 1, 0, 0. Bob's store has 16 stones in it. Andy's stone layout is 0, 0, 0, 0, 5, 0. Andy's store has 25 stones in it. It's Bob's turn.
Action:
- Bob selects pit 6b from his side.
- Stone falls in Bob's pit 5b.
- The stone from Bob's pit 5b and stones from Andys's opposite 2a go to Bob's store.
- There are no more stones on Andy's side and game ends, Andy win the game
- Scores of both players are counted by the program and displayed.

Postcondition: Bob's stone layout is 0, 0, 0, 1, 0, 0. Bob's store has 22 stones in it. Andy's stone layout is 0, 0, 0, 0, 0, 0. Andy's store has 26 stones in it. Game ends. All pits are inactive. Players can't make any more moves. Stone layout doesn't change. In the middle of the gaming environment is displayed Bob and Andy final count of the stones. Bob's score is 22, Andy's score is 25. It is displayed that Andy is winner of the game.

User Story 14

Title: Bob makes the last move, his stones end, Andy wins the game
Precondition: Bob's stone layout is 0, 0, 0, 0, 0, 1. Bob's store has 20 stones in mancala. Andy's stone layout is 0, 0, 0, 1, 0, 0. Andy's store has 26 stones in mancala. It's Bob's turn.
Action:
- Bob selects pit 1b from his side.
- Stone falls in Bob's mancala
- There are no more stones on Bob's side and game ends, Andy wins the game
- Scores of both players are counted by the program and displayed.

Postcondition: Bob's stone layout is 0, 0, 0, 0, 0, 0. Bob's store has 21 stones in it. Andy's stone layout is 0, 0, 0, 1, 0, 0. Andy's store has 26 stones in it. Game ends. All pits are inactive. Players can't make any more moves. Stone layout doesn't change. In the middle of the gaming environment is displayed Bob and Andy final count of the stones. Bob's score is 21, Andy's score is 27. It is displayed that Andy is winner of the game.

User story 15

Title: Bob makes the last move, his stones end, Bob wins the game
Precondition: Bob's stone layout is 0, 0, 0, 0, 0, 1. Bob's store has 25 stones in mancala. Andy's stone layout is 0, 0, 0, 1, 0, 0. Andy's store has 21 stones in mancala. It's Bob's turn.
Action:
- Bob selects pit 1b from his side.
- Stone falls in Bob's mancala
- There are no more stones on Bob's side and game ends, Bob win the game

- Scores of both players are counted by the program and displayed. It is displayed who did win or did the game and in a draw.

Postcondition: Bob's stone layout is 0, 0, 0, 0, 0, 0. Bob's store has 26 stones in it. Andy's stone layout is 0, 0, 0, 1, 0, 0. Andy's store has 21 stones in it. Game ends. All pits are inactive. Players can't make any more moves. Stone layout doesn't change. In the middle of the gaming environment is displayed Bob and Andy final count of the stones. Bob's score is 26, Andy's score is 21. It is displayed that Bob is winner of the game.

User Story 16

Title: Starting Mancala game immediately after the first game is over.
Precondition: In small window in the middle of the gaming environment Bob and Andy see final count of the stones in every store. Andy is winner of the game – he has more stones in store. Gaming environment offers Bob and Andy to play game again.
Action:
• Bob pushes the "Play again" button
Postcondition: Game window is opened and gaming environment is displayed. There Bob and Andy see the board, which consist 2 large cup – i.e. Stores and 12 small pits that contain 4 stones each. Its also indicated which 6 pits belong to Bob and which 6 pits at the opponent side to Andy. Application is waiting for Bob to click on one of the pit.

User Story 17

Title: Bob hoards the stones on his side by the first move
Precondition: Mancala game is started and game environment is displayed. The game environment consists of a board with 2 empty stores (i.e. Mancalas or large pits) and 12 small pits that contain 4 stones each. It is also indicated which pits belong to Bob and which to Andy, and that it is currently Bob's turn. Bob is offered by the application to select a pit on his side and application is waiting for him to click on one of the small pit.
Action:
• Bob selects pit 6b on his side.
• The stones go one by one into every next pit.
• The last stone falls to Bob's pit 2b.
Postcondition: Bob's stone layout is 0, 5, 5, 5, 5, 4. Bob's store has 0 stones in it. Andy's stone layout is 4, 4, 4, 4, 4, 4. Andy's store has 0 stones in it. It's Andy's turn.

User Story 18

Title: Bob hoards the stones on the opponent side by the first move
Precondition: Mancala game is started and game environment is displayed. The game environment consists of a board with 2 empty stores (i.e. Mancalas or large pits) and 12 small pits that contain 4 stones each. It is also indicated which pits belong to Bob and which to Andy, and that it is currently

Bob's turn. Bob is offered by the application to select a pit on his side and application is waiting for him to click on one of the small pit.

Action:

• Bob selects pit 1b on his side.

• The stones go one by one into every next pit.

• One stone falls to Bob's store.

• The last stone falls to Andy's pit 4a.

Postcondition: Bob's stone layout is 4, 4, 4, 4, 4, 0. Bob's store has 1 stone in it. Andy's stone layout is 5, 5, 5, 4, 4, 4. Andy's store has 0 stones in it. It's Andy's turn.

User Story 19

Title: Stone falls into an empty pit and opponent's opposite pit is empty

Precondition: Bob's stone layout is 0, 1, 0, 1, 0, 1. Bob's store has 18 stones in it. Andy's stone layout is 1, 2, 0, 0, 0, 0. Andy's store has 24 stones in it. It's Andy's turn.

Action:

- Andy selects pit 5a on his side.
- The stones go one by one into every next pit.
- The last stone falls to Andy's pit 3a.

Postcondition: Bob's stone layout is 0, 1, 0, 1, 0, 1. Bob's store has 18 stones in it. Andy's stone layout is 1, 0, 1, 1, 0, 0. Andy's store has 24 stones in it. It's Bob's turn.

User Story 20

Title: Game ends with a draw

Precondition: Bob's stone layout is 0, 0, 0, 0, 0, 0. Bob's store has 24 stones in mancala. Andy's stone layout is 0, 0, 0, 0, 0, 1. Andy's store has 23 stones in it. It's Andy's turn.

Action:

- Andy selects pit 1a from his side.
- Stone falls in Andy's mancala
- There are no more stones on Andy's side and game ends
- Scores of both players are counted by the program and displayed. It is displayed who did win or did the game and in a draw.

Postcondition: In the middle of the gaming environment is displayed Bob's and Andy's final count of the stones. Bob's score is 24, Andy's score is 24. It is displayed that the game ended in a draw.