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| **No** | **Title** | **Pre-Condition** | **Action** | **Post Condition** |
|  | ***Alex starts the Mancala game*** | * Both Alex and Lisa are in front of PC screen * The Mancala game is pre-installed in the PC * PC is running | * Alex presses the Mancala game icon on the Desktop screen | * Put your name window will open |
|  | ***Lisa agrees to play with Alex*** | * The game has already started * Alex has already register his name. | * Lisa will put her name | * The mancala board will be displayed in the screen. (if display rules is there then display rules screen) |
|  | ***Alex and Lisa input their names*** | * The game is running * The game requests to enter the players names | * Alex inputs his name and press Ok button * Lisa inputs her name and press Ok button | * The game saves the name * The active game board is displayed |
|  | ***Displaying the Mancala game rules*** | * The game is running * Lisa has put her name | * The game rules is displaying in the screen | * A button ‘Start or (may be agree or disagree)’ is displayed at the bottom of the screen * After pressing start, the game will be started. |
|  | ***Displaying the Mancala game board*** | * The game is running * Alex and Lisa agree to start the game * The game rules is displaying | * Lisa presses the ‘start’ button | * The game board is displayed in the screen. |
|  | ***Player selection*** | * The game is running * Alex and Lisa agreed to start the game * The Mancala playing keys were displayed on the PC screen * A button ‘Next’ is displayed at the bottom of the screen | * Lisa presses the ‘Next’ button | * Alex is prompted to play the first move by showing ‘Play!’ button |
|  | ***Initializing Mancala board*** | * Alex was prompted to play the first move by showing ‘Play!’ button | * Alex presses the ‘Play!’ button | * Each of the cups contains four stones. * Mancalas are empty |
|  | ***Alex starts the game and scores no point*** | * The game is running * Alex has been selected to start the first move * Each of Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contains four stones * Alex’s Mancala is empty | * Alex grabs all the four stones from his 1st cup and anti-clock wisely places each stone in 2nd,3rd,4th and 5th cup | * Alex’s 1st cup is empty * There are five stones in 2nd, 3rd,4th and 5th cup each. * 6th cup has four stones. * Alex’s Mancala is empty * Now it is Lisa’s turn |
|  | ***Lisa scores one point*** | * The game is running * Alex has completed his move * Now, its Lisa’s turn * Each of Lisa’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left, in respect of Alex’s side) contains four stones * Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left, in respect of Alex’s side) contains respectively 0,5,5,5,5,4 stones. * Lisa’s Mancala is empty | * Lisa grabs all the four stones from her 4th cup and anti-clock wisely (in respect to her side) places each stone in 5th, 6th cup and one in her Mancala. * Lisa place the last stone in Alex’s 1st cup. | * Each of Lisa’s 1st,2nd, 4th, 5th and 6th cup contains 4,4,5,5,5 respectively * Lisa’s 3rd cup is empty * Lisa’s Mancala contains 1 stone * Now it’s Alex’s turn |
|  | ***Updating player’s score*** | * The game is running * Alex’s previous score was 5 * Now it’s Alex’s turn * Each of Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contain 1,2,1,2,3 and 1 stone(s) respectively * Alex’s Mancala contains 5 stones | * Alex grabs the only one stone from his 6th cup and places it in his Mancala | * Alex’s Mancala contains 6 stones * Each of Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contain 1,2,1,2,3 stones respectively * Alex’s 6th cup is empty * Alex’s score is now 6 * Now it’s Alex’s turn again |
|  | ***Alex completes a normal move and gets another extra move*** | * The game is running * Now it’s Alex’s turn * Each of Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contain 1,2,1,2,3 and 1 stone(s) respectively * Each of Lisa’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contain 4,1,4,0,4 and 3 stone(s) respectively * Alex’s Mancala contains 5 stones | * Alex grabs the only one stone from his 6th cup and places it in his Mancala | * Alex’s 6th cup is empty * Each of Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contain 1,2,1,2,3 stones respectively * Alex’s Mancala contains 6 stones * Now it’s Alex’s turn again |
|  | ***Lisa completes a normal move and captures a cup of stones of Alex*** | * The game is running * Now it’s Lisa’s turn * Each of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) contain 5,1,2,1,2 stones respectively * Lisa’s 6th cup is empty * Alex’s 6th cup (from the left) contains 3 stones * Lisa’s Mancala has 4 stones | * Lisa grabs 5 stones from her 1st cup and anti-clock wisely (in respect to her side) places each stone in her 2nd,3rd,4th,5th and 6th cups | * Each of Lisa’s 2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) contains 2,3,2,3 stones respectively * Lisa’s 1st and 6th cup are empty * Alex’s 6th cup is empty * Lisa’s Mancala has 8 stones * Now it’s Alex’s turn |
|  | ***Alex is now playing the extra move*** | * Alex has got an extra move * Each of Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contains 1,1,2,3,0 and 1 stone(s) respectively * Alex’s Mancala contains 5 stones * Alex’s turn | * Alex moves 2 stones from 3rd cup and put one in 4th and one in 5th cup. | * Each of Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contains 1,1,0,4,1 and 1 stone(s) respectively * Alex’s Mancala contains 5 stones * It is Lisa’s trun. |
|  | ***Alex has completed an extra move and gets another extra move*** | * The game is running * Now, Alex has already got an extra move and played * Each of Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contain 1,1,2,3,0 and 1 stone(s) respectively * Alex’s Mancala contains 5 stones * Alex’s trun | * Alex grabs the only one stone from his 6th cup and places it in his Mancala | * Alex’s 6th cup is empty * Each of Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contain 1,1,2,3,0 stones respectively * Alex’s Mancala contains 6 stones * Now it’s Alex’s turn again |
|  | ***Lisa has completed her second extra move and gets another extra move*** | * The game is running * Lisa has completed two extra move * Now, Lisa will play her third extra move * Each of Lisa’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left, in respect of Alex’s side) contain 1,1,2,3,0 and 0 stone(s) respectively * Lisa’s Mancala contains 6 stones | * Lisa grabs all three stones from her 4th cup and anti-clock wisely (in respect to her side) places each stone in her 5th, 6th cups and one in the Mancala | * Lisa’s 4th cup is empty * Each of Lisa’s 1st,2nd, 3rd, 5th  ,6th cups(from the left, in respect of Alex’s side) contain 1,1,2,1,1 stones respectively * Lisa’s Mancala contains 7 stones * Now it’s again Lisa’s turn again |
|  | ***Lisa has completed her second extra move and does not get another extra move*** | * The game is running * Lisa has completed two extra move * Now, Lisa will play her third extra move * Each of Lisa’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left, in respect of Alex’s side) contain 3,1,2,3,0 and 0 stone(s) respectively * Lisa’s Mancala contains 6 stones * It is Lisa’s turn | * Lisa grabs all three stones from her 1st cup and anti-clock wisely (in respect to her side) places each stone in her 2nd , 3rd and 4th cup. | * Lisa’s 1st cup is empty * Each of Lisa’s 1st, 2nd, 3rd, 4th ,5th  ,6th cups(from the left, in respect of Alex’s side) contain 0,2,3,4,0,0 stones respectively * Lisa’s Mancala contains 6 stones * Now it’s Alex’s turn again |
|  | ***Alex’s last stone falls into an empty cup and doesn’t capture any stone*** | * The game is running * Now it’s Alex’s turn * Each of Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contain 5,1,3,2,1 stones respectively * Alex’s 6th cup is empty * Lisa’s 1st cup (from the left, in respect of Alex’s side) is empty * Alex’s Mancala has 4 stones | * Alex grabs 5 stones from her 1st cup and anti-clock wisely places each stone in his 2nd,3rd,4th,5th and 6th cups | * Each of Alex’s 2nd, 3rd,4th, 5th and 6th cups(from the left) contain 2,4,3,2,1 stone(s) respectively * Alex’s 1st is empty * Lisa’s 6th cup is empty * Alex’s Mancala has 4 stones * Now, it’s Lisa’s turn |
|  | ***Alex captures a cup of stones of Lisa in his extra turn*** | * The game is running * Alex has completed one move * Now it’s Alex’s extra turn * Each of Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contain 5,1,3,2,1 stones respectively * Alex’s 6th cup is empty * Lisa’s 6th cup (from the left, in respect of Alex’s side) contains 3 stones * Alex’s Mancala has 4 stones | * Alex grabs 5 stones from her 1st cup and anti-clock wisely places each stone in his 2nd,3rd,4th,5th and 6th cups | * Each of Alex’s 2nd, 3rd,4th, 5th cups(from the left) contain 2,4,3,2 stones respectively * Alex’s 1st and 6th cup are empty * Lisa’s 6th cup is empty * Alex’s Mancala has 8 stones * Now it’s Lisa’s turn |
|  | ***Lisa finishes playing all her stones and Alex remaining stones added to his Mancala*** | * The game is running * Now it’s Lisa’s turn * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th and 6th cups(from the left) contains 0,0,0,0, 2,0 stones respectively * Lisa’s Mancala has 30 stones * Alex’s Mancala has 15 stones | * Lisa grabs the only one stone from her 6th cup and places it in her Mancala | * Lisa’s all cups are empty * Alex’s all cups are empty * Lisa’s Mancala contains 31 stones * Alex’s Mancala contains 17 stones |
|  | ***Alex saves and quits Mancala game*** | * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contains 0,0,0,0 and 2 stones respectively * Lisa’s Mancala has 30 stones * Alex’s Mancala has 15 stones * The game window contains ‘Save and Quit’ and ‘Quite’ button | * Alex presses ‘Save and Quit’ button | * Alex’s and Lisa’s scores were saved in the memory and the Mancala GUI board is closed |
|  | ***Lisa quits in the middle of the game without saving*** | * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contains 0,0,0,0 and 2 stones respectively * Lisa’s Mancala has 30 stones * Alex’s Mancala has 15 stones * The game window contains ‘Save and Quit’ and ‘Quite’ buttons | * Lisa presses the ‘ Quit’ button | * Alex’s and Lisa’s scores were not saved in the memory and the Mancala GUI board is closed |
|  | ***Game finishes and requests the player to play again or quit the game*** | * The ‘Alex: 32 Points   Lisa: 16 Points  Winner: Alex!! ’ message is displayed on the PC screen   * An ‘Proceed’ button is displayed on the screen | * Alex presses the ‘Proceed’ button | * ‘Play again?’ and ‘Quit’ buttons are displayed on the PC screen |
|  | ***Alex wins the game when Lisa plays the last move*** | * The game is running * Now it’s Lisa’s turn * All of Lisa’s 1st,2nd, 3rd,4th, 5th cup(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th and 6th cup(from the left) contains 0,0,0,0,2 and 0 stones respectively * Lisa’s Mancala has 15 stones * Alex’s Mancala has 30 stones | * Lisa grabs the only one stone from her 6th cup and places it in her Mancala | * Lisa’s all cups are empty * Alex’s all cups are empty * Lisa’s Mancala contains 16 stones * Alex’s Mancala contains 32 stones * Alex won the game |
|  | ***Alex loses the game when Lisa plays the last move*** | * The game is running * Now it’s Lisa’s turn * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contains 0,0,0,0 and 2 stones respectively * Lisa’s Mancala has 30 stones * Alex’s Mancala has 15 stones | * Lisa grabs the only one stone from her 6th cup and places it in her Mancala | * Lisa’s all cups are empty * Alex’s all cups are empty * Lisa’s Mancala contains 31 stones * Alex’s Mancala contains 17 stones * Alex lost the game |
|  | ***Lisa wins the game when Lisa plays the last move*** | * The game is running * Now it’s Lisa’s turn * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contains 0,0,0,0 and 2 stones respectively * Lisa’s Mancala has 30 stones * Alex’s Mancala has 15 stones | * Lisa grabs the only one stone from her 6th cup and places it in her Mancala | * Lisa’s all cups are empty * Alex’s all cups are empty * Lisa’s Mancala contains 31 stones * Alex’s Mancala contains 17 stones * Lisa won the game |
|  | ***Lisa loses the game when Lisa plays the last move*** | * The game is running * Now it’s Lisa’s turn * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contains 0,0,0,0 and 2 stones respectively * Lisa’s Mancala has 15 stones * Alex’s Mancala has 30 stones | * Lisa grabs the only one stone from her 6th cup and places it in her Mancala | * Lisa’s all cups are empty * Alex’s all cups are empty * Lisa’s Mancala contains 16 stones * Alex’s Mancala contains 32 stones * Lisa lost the game |
|  | ***Displaying game result*** | * The game is running * Now it’s Lisa’s turn * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th cups(from the left) contains 0,0,0,0 and 2 stones respectively * Lisa’s Mancala has 15 stones * Alex’s Mancala has 30 stones | * Lisa grabs the only one stone from her 6th cup and places it in her Mancala | * Lisa’s Mancala contained 16 stones * Alex’s Mancala contained 32 stones * Lisa’s all cups are empty * Alex’s all cups are empty * The ‘Alex: 32 Points   Lisa: 16 Points  Winner: Alex!! ’ message is displayed on the PC screen   * A button ‘Proceed’ is displayed at the bottom of the screen |
|  | ***The game becomes a tie*** | * The game is running * Now it’s Lisa’s turn * All of Lisa’s 1st,2nd, 3rd,4th, 5th cups(from the left, in respect of Alex’s side) are empty * Lisa’s 6th cup contains 1 stone * Alex’s 1st,2nd, 3rd,4th, 5th and 6thcups(from the left) contains 0,0,0,0, 2 and 0 stones respectively * Lisa’s Mancala has 23 stones * Alex’s Mancala has 22 stones | * Lisa grabs the only one stone from her 6th cup and places it in her Mancala | * Lisa’s all cups are empty * Alex’s all cups are empty * Lisa’s Mancala contains 24 stones * Alex’s Mancala contains 24 stones |
|  | ***Displaying message either to restart or end the game*** | * The game is finished * The ‘Alex: 32 Points   Lisa: 16 Points  Winner: Alex!! ’ message is displayed on the PC screen   * A button ‘Proceed’ is displayed at the bottom of the screen | * Lisa presses the ‘Proceed’ button on the screen | * The message is shown on the screen with the buttons ‘Play again?’ and ‘Quit ’ |
|  | ***Lisa quits the finished game*** | * The game is finished * The message is shown on the screen with the buttons ‘Play again?’ and ‘Quit ’ | * Lisa presses ‘Quite’ button | * ‘Thank you for playing!’ is displayed on the PC screen |
|  | ***Alex restarts playing Mancala*** | * The game is finished * The message is shown on the screen with the buttons ‘Play again?’ and ‘Quit’ | * Alex presses ‘Play again?’ button | * Mancala GUI board is again displayed on the screen |
|  | ***Each successive new game, winner plays the first move*** | * The first game is finished * Alex was the winner and Lisa was the loser * The message is shown on the screen with the buttons ‘Play again?’ and ‘Quit’ | * Alex presses ‘Play again?’ button | * Mancala GUI board is again displayed on the screen * Now it’s Alex’s turn |
|  | ***Close the game*** |  |  |  |