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CSCI 5448
11/9/2015

Use Case needed for selected use case

Use Case ID:	UC-011
Use Case Name:	Select game
Description:	The user can select either any game in the arcade.

<table>
<tr><td><b>Actors:</b></td><td>User</td></tr>
<tr><td><b>Pre-condition:</b></td><td>User launched the application.
User is logged in.</td></tr>
<tr><td><b>Post-condition:</b></td><td>The user is start playing the selected game.</td></tr>
<tr><td><b>Frequency of use:</b></td><td>Each instance of the application.</td></tr>
<tr><td><b>Flow of events:</b></td><td><table><tr><th>#</th><th>Actor action</th><th>System response</th></tr><tr><td>1</td><td>Select game</td><td>Game name is stored and game interface is launched</td></tr></table></td></tr>
<tr><td><b>Variations:</b></td><td>None.</td></tr>
<tr><td><b>Notes and issues:</b></td><td></td></tr>
<tr><td><b>Developer notes:</b></td><td></td></tr>
</table>

Use Case ID:	UC-011
Use Case Name:	Select player mode
Description:	The user can select either single player mode or two player mode.

<table>
<tr><td><b>Actors:</b></td><td>User</td></tr>
<tr><td><b>Pre-condition:</b></td><td>The user launched the application.</td></tr>
<tr><td><b>Post-condition:</b></td><td>The user is either in single player mode or in two player mode.</td></tr>
<tr><td><b>Frequency of use:</b></td><td>Each instance of the application.</td></tr>
<tr><td><b>Flow of events:</b></td><td>
<table>
<tr><th>#</th><th>Actor action</th><th>System response</th></tr>
<tr><td>1</td><td>User login in the application</td><td>Set up of arcade interface</td></tr>
<tr><td>2</td><td>Select game</td><td>Game name is stored and game interface is launched</td></tr>
<tr><td>3</td><td>Select mode</td><td>Set up platform response of the selected game depending on selection made</td></tr>
</table>
</td></tr>
<tr><td><b>Variations:</b></td><td>None.</td></tr>
<tr><td><b>Notes and issues:</b></td><td></td></tr>
<tr><td><b>Developer notes:</b></td><td></td></tr>
</table>

Use Case ID:	UC-021
Use Case Name:	Single Player Mode
Description:	The user can play any game in the arcade in single player mode (against the AI).

<table>
<tr><td><b>Actors:</b></td><td>User</td></tr>
<tr><td><b>Pre-condition:</b></td><td>Application is started.
User is logged in.</td></tr>
<tr><td><b>Post-condition:</b></td><td>The user can play any game against the AI.</td></tr>
<tr><td><b>Frequency of use:</b></td><td>Each instance the user selects single player mode and selects a game to play.</td></tr>
<tr><td><b>Flow of events:</b></td><td>
<table>
<tr><th>#</th><th>Actor action</th><th>System response</th></tr>
<tr><td>1</td><td>Select game</td><td>Game name is stored and game interface is launched</td></tr>
<tr><td>2</td><td>Select mode single player</td><td>AI is set up for the game selected</td></tr>
</table>
</td></tr>
<tr><td><b>Variations:</b></td><td>None.</td></tr>
<tr><td><b>Notes and issues:</b></td><td></td></tr>
<tr><td><b>Developer notes:</b></td><td></td></tr>
</table>

Use Case ID:	UC-022
Use Case Name:	Two Player Mode
Description:	The users can play any game in the arcade in two player mode (against each other).

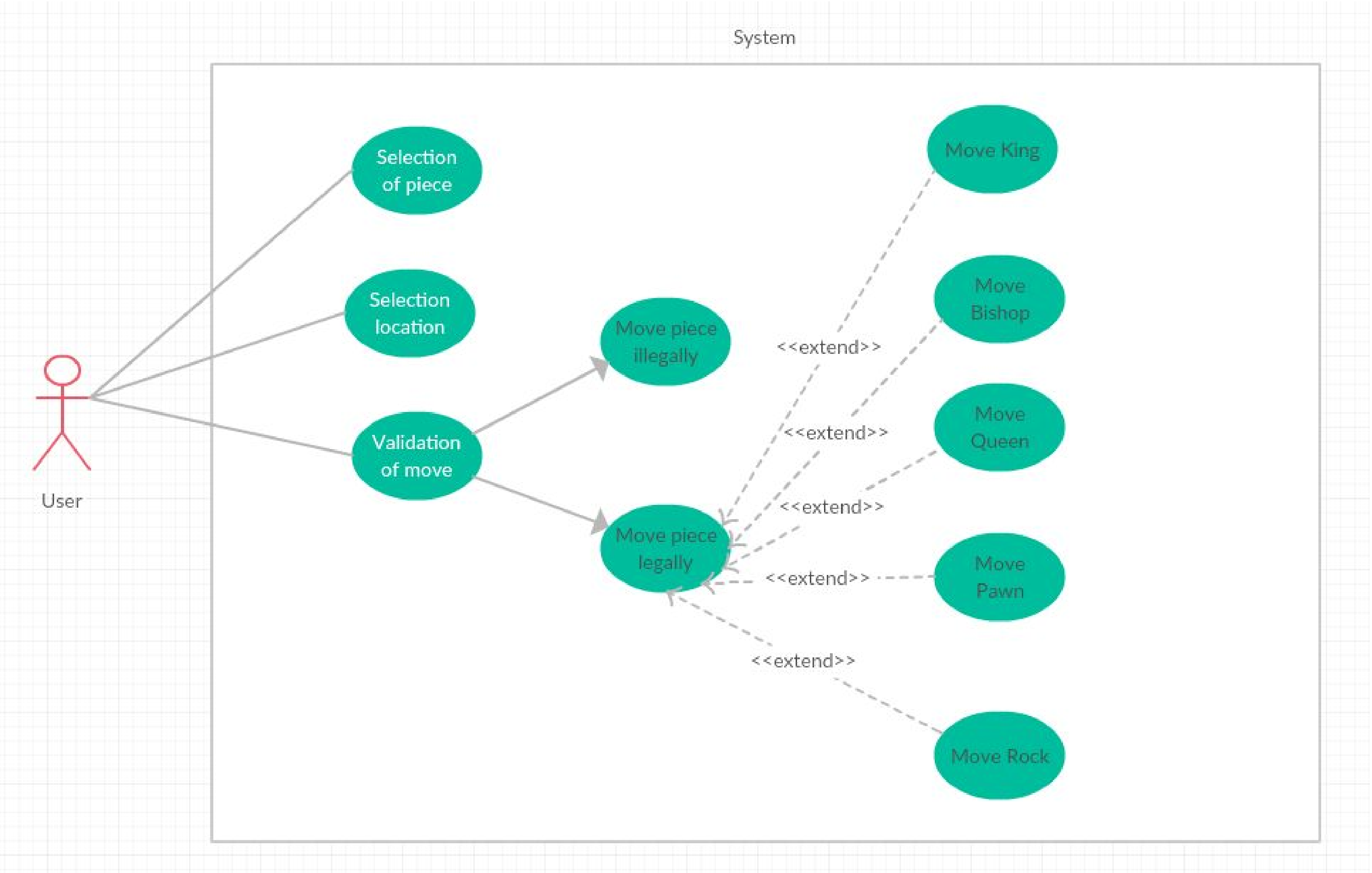
<table>
<tr><td><b>Actors:</b></td><td>User</td></tr>
<tr><td><b>Pre-condition:</b></td><td>Application is started.
User is logged in.</td></tr>
<tr><td><b>Post-condition:</b></td><td>The users can play any game in the arcade in two player mode (against each other).</td></tr>
<tr><td><b>Frequency of use:</b></td><td>Each instance the user selects two player mode and selects a game to play.</td></tr>
<tr><td><b>Flow of events:</b></td><td>
<table>
<tr><th>#</th><th>Actor action</th><th>System response</th></tr>
<tr><td>1</td><td>Select game</td><td>Game name is stored and game interface is launched</td></tr>
<tr><td>2</td><td>Select mode dual player</td><td>Interface is setup and system awaits a player to execute a move</td></tr>
</table>
</td></tr>
<tr><td><b>Variations:</b></td><td>None.</td></tr>
<tr><td><b>Notes and issues:</b></td><td></td></tr>
<tr><td><b>Developer notes:</b></td><td></td></tr>
</table>

Use case to be analyzed: Execute Move in Chess Game

Use Case ID:	UC-041
Use Case Name:	Execute Move Chess
Description:	The user executes a move in the game of chess.

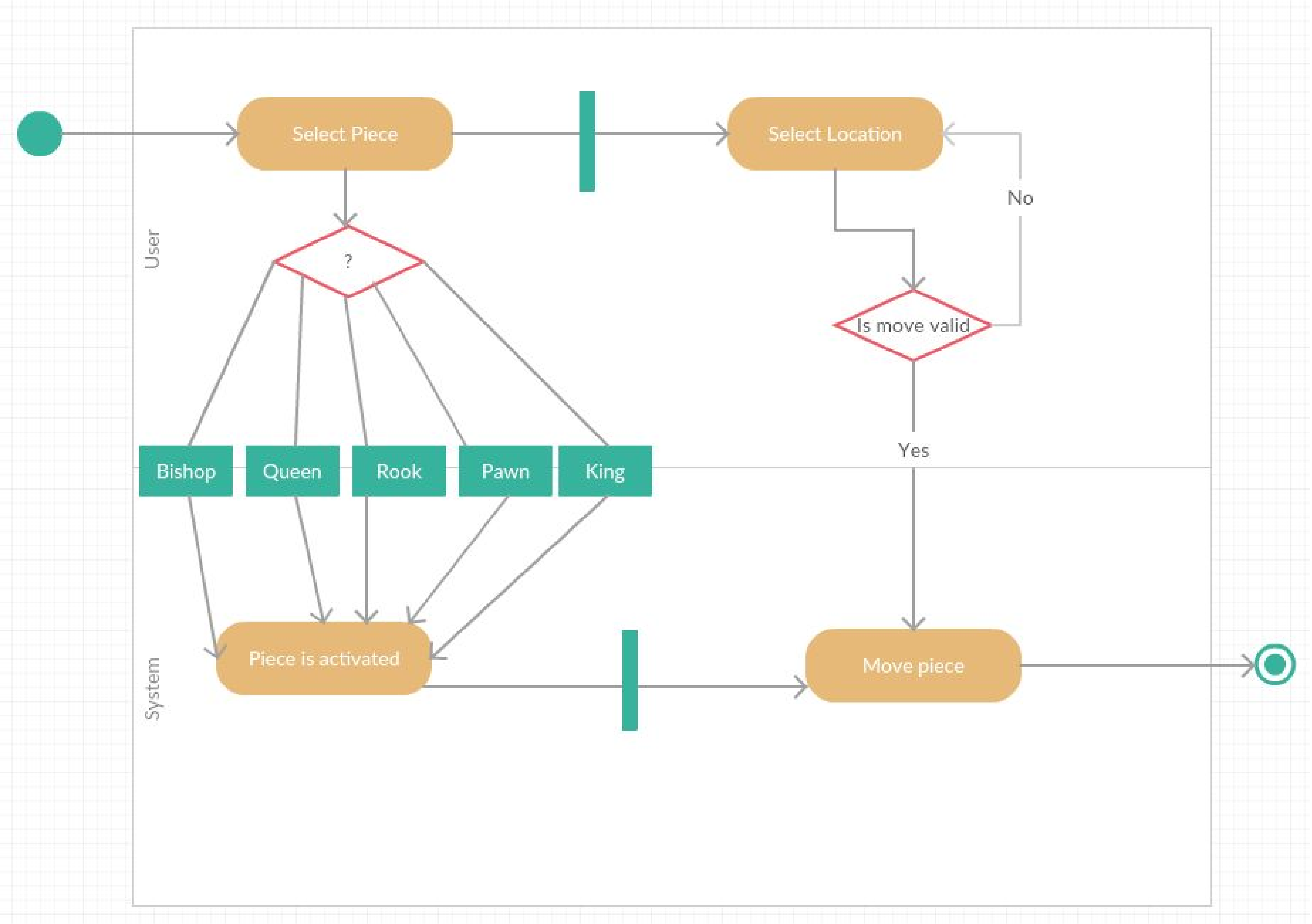
<table>
<tr><td><b>Actors:</b></td><td>User</td></tr>
<tr><td><b>Pre-condition:</b></td><td>A game of chess has been launched in either single or two player mode.
Player has been switched</td></tr>
<tr><td><b>Post-condition:</b></td><td>A user’s desired move is executed.</td></tr>
<tr><td><b>Frequency of use:</b></td><td>When player is switched and the game has not yet been won or tied.</td></tr>
<tr><td><b>Flow of events:</b></td><td>
<table>
<tr><th>#</th><th>Actor action</th><th>System response</th></tr>
<tr><td>1</td><td>Current player select piece to move</td><td>Piece is selected and returned to user</td></tr>
<tr><td>2</td><td>Destination of selected piece is chosen</td><td>The location of the piece is identified and stored</td></tr>
<tr><td>3</td><td>Confirmation of the move of the piece</td><td>Piece is moved to stored location</td></tr>
</table>
</td></tr>
<tr><td><b>Variations:</b></td><td>If an invalid move is selected, the move is not executed.</td></tr>
<tr><td><b>Notes and issues:</b></td><td></td></tr>
<tr><td><b>Developer notes:</b></td><td></td></tr>
</table>

Use Case Diagram for UC-041

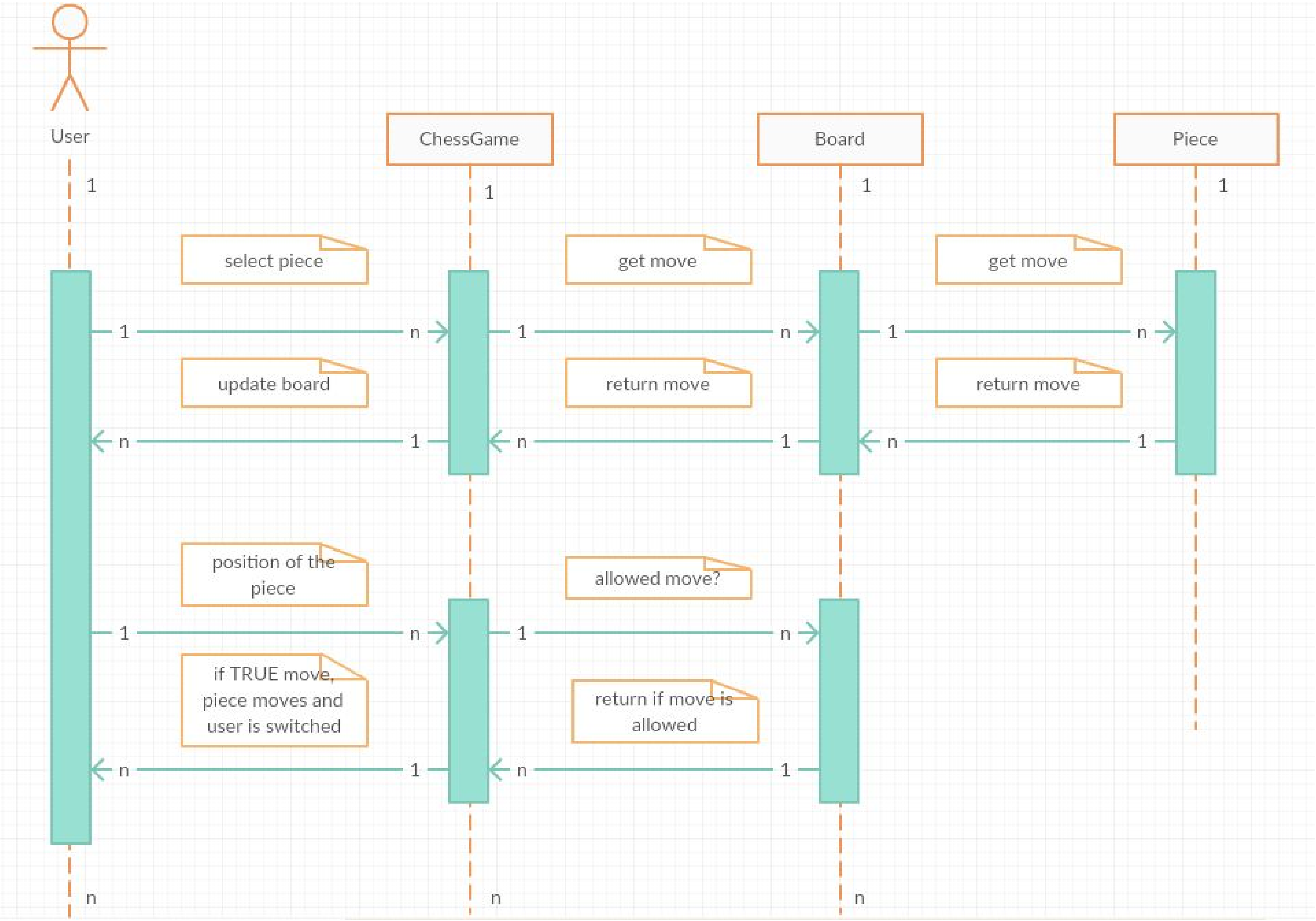


Class Diagram for UC-041

Activity Diagram UC-041



Sequence Diagram UC-041


User
ChessGame
Board
Piece
1
1
1
1
select piece
get move
get move
1
n
1
n
1
n
update board
return move
return move
n
1
n
1
n
1
position of the piece
allowed move?
1
n
1
n
if TRUE move, piece moves and user is switched
return if move is allowed
n
1
n
1
n
n
n