

# INFO1113 / COMP9003 Assignment Warmup

Due: 31 March 2024, 11:59PM AEST

*This assignment is worth 4% of your final grade.*

## Task Description

Implement the Checkers game from Task 1 using the Processing library for graphics and gradle as a dependency manager. You can access the documentation from [here](#). As with any assignment, make sure that your work is your own, and do not share your code or solutions with other students.

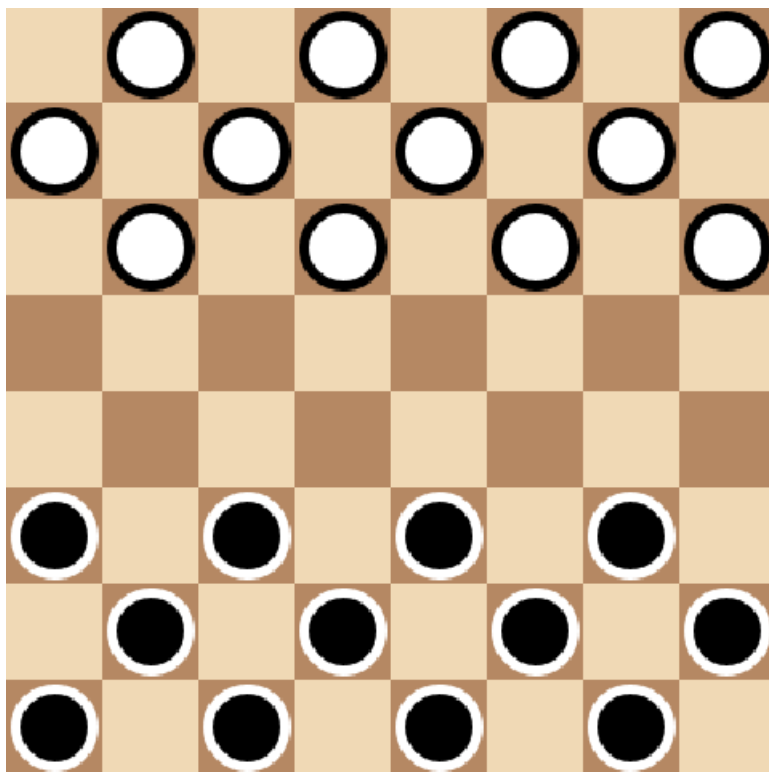


Figure 1. The initial starting arrangement of the board is shown above.

White pieces move down, and black pieces move up. White goes first. When a piece reaches the end of the board, it is promoted to a king and can then move in both directions.

Black king: 

White King: 

Piece movement is diagonally one space, or two spaces if they are able to jump over an adjacent piece to land in an empty cell. Pieces capture an opponent's piece by jumping over it – the opponent's piece is then removed from play.

Players take turns to make moves. When the user clicks on a piece, available moves should be displayed with a blue highlight, and the selected piece's cell is highlighted in green.

If the user clicks on a different one of their pieces at this point, that other piece will become selected, and its available moves should be shown. If the user clicks on a blue highlighted cell (which is an available move) then the piece will move to that cell, and the player's turn ends. You can choose what your board width should be, ranging from either 384px (minimum) to 768px (maximum).

## Marking Criteria (4%)

Your final submission is due on Sunday 31 March 2024 at 11:59PM. To submit, you must upload your build.gradle file and src folder to Ed. Do NOT submit the build folder. Ensure src is in the root directory with the other files, and not part of a zip, then press MARK.

Shown during tutorial in week 5	<ul style="list-style-type: none"> <li>Window launches and shows initial board layout correctly.</li> <li>Clicking on a piece highlights the piece's cell in green</li> <li>The player who captures all of their opponent's pieces wins.</li> </ul>
1 mark	<ul style="list-style-type: none"> <li>Available moves are correctly determined and highlighted in blue when piece is selected (diagonal one space, or two spaces if able to jump over a piece)</li> </ul>
1 mark	<ul style="list-style-type: none"> <li>Pieces move from one cell to the next when an available move cell (blue highlighted) is clicked</li> <li>Extension: Piece movement is smoothly animated transitioning from one cell to the next</li> </ul>
1 mark	<ul style="list-style-type: none"> <li>Pieces can jump over their own pieces and opponent's pieces (jumping multiple times in one turn does not need to be implemented)</li> <li>When a piece jumps over an opponent's piece, the opponent's piece is captured (removed from play)</li> </ul>
1 mark	<ul style="list-style-type: none"> <li>When a piece moves to the end of the board, it is promoted to a king, and can move in both directions henceforth. Kings are shown with different graphics.</li> </ul>

## Academic Declaration

By submitting this assignment you declare the following:

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*I realise that I may be asked to identify those portions of the work contributed by me and required to demonstrate my knowledge of the relevant material by answering oral questions or by undertaking supplementary work, either written or in the laboratory, in order to arrive at the final assessment mark.*

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