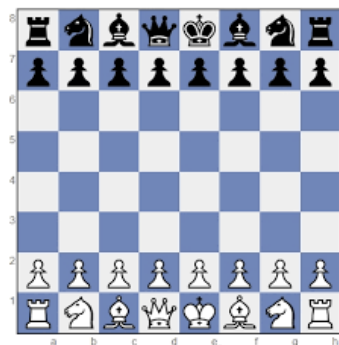


**Checkmate!**

In this in-class activity, we will create a simple **chess** example using Java.

There are 3 classes (ChessBoardUI, Pawn, Main) and 1 interface (ChessPiece).

**[Rule of Chess]**

1. A chess board is a board of fixed size, **8x8**, where each square initially contains an whitespace (“ ”).
2. Chess pieces include King, Queen, Rook, Bishop, Knight, and Pawn, totaling six types.

For this activity, we attempt to implement only the Pawn class. (You may create other piece classes if you want!)

**[Code structure and implementation details]** – DO NOT MODIFY Main.java

1. The **Pawn** class implements the **ChessPiece** interface.
2. **setPosition()**: Places a piece at a specific coordinate (x,y).
3. **getPossibleMoves()**: Returns the coordinates to which the piece can move.
4. **checkMovable()**: Verifies if there are no other pieces at the specified location, thus confirming the move's feasibility.
5. **move()**: Moves the piece to the target coordinate.

**[Pawn Class Implementation Details]**

1. `setPosition()`: At the start of the game, Pawns are placed at coordinates (6,0), (6,1), (6,2), (6,3), (6,4), (6,5), (6,6), and (6,7).
2. `getPossibleMoves()`: Pawns can only move forward, one square at a time. (Let's ignore the rule allowing two squares on the first move and the rule for capturing diagonally in this activity.)
3. `checkMovable()`: Checks if there are no other pieces at the target coordinates.
4. `move()`: Moves the Pawn one square forward.

**[Output Result of Main.java]**

```

Board initialized
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[P, P, P, P, P, P, P, P]
[ , , , , , , , ]
The (6,0) piece is movable
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[P, , , , , , , ]
[ , P, P, P, P, P, P, P]
[ , , , , , , , ]
The (6,4) piece is movable
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[P, , , , P, , , ]
[ , P, P, P, , P, P, P]
[ , , , , , , , ]
The (5,4) piece is movable
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , , , , , ]
[ , , , P, , , , ]
[P, , , , , , , ]
[ , P, P, P, , P, P, P]
[ , , , , , , , ]

```

**[While doing the activity, refer to and utilize the followings: ]**

- Interface
- Parameter polymorphism