

BİL 211 - 1st Assignment - Chess Game on Sliding Board

In this assignment you will develop the game of chess. As is well known, chess is played with two players. One player takes the black pieces and the other the white pieces. Each player has 8 pawns, 2 rooks, 2 knights, 2 bishops, a queen and a king. Each piece has a different movement ability and score. Whoever loses the king loses the game. However, the game you will develop has two fundamental differences from classical chess.

- 1) Normally the pawns start the game with the pawns in front, but in this game the pawns start behind and the other pieces in front. The start of the game is shown below. The numbers are the column numbers and the leftmost letters are the row coordinates. Uppercase letters indicate white pieces, lowercase letters indicate black pieces. "-" indicates empty squares. P stands for pawn, k for rook, a for knight, f for bishop, V for queen, s for king.

	1	2	3	4	5	6	7	8
a	P	P	P	P	P	P	P	P
b	K	A	F	V	S	F	A	K
c	-	-	-	-	-	-	-	-
d	-	-	-	-	-	-	-	-
e	-	-	-	-	-	-	-	-
f	-	-	-	-	-	-	-	-
g	k	a	f	v	s	f	a	k
h	p	p	p	p	p	p	p	p

- 2) In each move of the game, all pieces move to the left and those in the leftmost column move to the right. For example, consider the following game situation.

a	P	P	P	P	P	P	P	P
b	-	A	F	V	S	F	A	K
c	K	-	-	-	-	-	-	-
d	-	-	-	-	-	-	-	-
e	-	-	-	-	-	-	-	a
f	-	-	-	-	-	-	-	-
g	k	a	f	v	s	f	-	k
h	p	p	p	p	p	p	p	p

Before a new player plays, the board will be in the following state.

a	P	P	P	P	P	P	P	P
b	A	F	V	S	F	A	K	-
c	-	-	-	-	-	-	-	K
d	-	-	-	-	-	-	-	-
e	-	-	-	-	-	-	a	-
f	-	-	-	-	-	-	-	-
g	a	f	v	s	f	-	k	k
h	p	p	p	p	p	p	p	p

The points of the tiles are as follows and each player gets as many points as the number of tiles eaten:

Pawn 1 point

Bishop 3 points

Knight 3 points

Rook 5 points

Queen 9 points

In the game, there are no chess-specific special features such as the rook, the pawn turning into the desired piece if it reaches the last square, the pawn being able to move two squares on the first move, etc., but only the standard known moves of each piece.

You need to write an interactive game. Each player has to show the final version of the screen as above without playing and write the following message (if it is white's turn).

"It's White's turn. Enter the coordinate of the piece you want to play and the coordinate where you want to put the piece"

The player must also enter an input in the following format: <first coordinate> <last coordinate>

For example, if the player enters "a2 b2", he/she should place the piece at coordinate a2 at coordinate b2. If he/she fails to do so, the player should be given the message "incorrect move" and asked to play again.

If the user types "exit", the game should be terminated and each user's score should be written on the screen.

The file that will run the game must be called Main.java. In this assignment you have to use object oriented programming. So the following classes must be present.

"Game" controls the general operation of the game

"Player" is the class for all players

"Board" is the game board that holds the pieces

"Item" is the superclass of player pieces.

And **you have to** define classes for all other stone types.

Those who do not use these classes in their solutions **will not receive points for their assignments**. It is left to you to decide which other objects should be included.