

CRC Cards:

Board	
Responsibilities: <ul style="list-style-type: none">• Draw Boards on screen	Collaborators: <ul style="list-style-type: none">• BoardModel• BoardItem

BoardModel	
Responsibilities: <ul style="list-style-type: none">• Interacts with board (eg. adding items)	Collaborators: <ul style="list-style-type: none">• BoardItem• Board

BoardItem	
Responsibilities: <ul style="list-style-type: none">• Primary color (background)• Secondary color (foreground, circle)• Draw item on screen	Collaborators: <ul style="list-style-type: none">• Board• BoardModel

BoardHead	
Responsibilities: <ul style="list-style-type: none">• Invisible (transparent) board component located at the top of the board• Gives the position and size of the BoardTiles	Collaborators: <ul style="list-style-type: none">• BoardItem• Board

BoardTiles	
Responsibilities: <ul style="list-style-type: none">• Draws a single board tile on the screen• Secondary Color is transparent	Collaborators: <ul style="list-style-type: none">• BoardItem• Board

BoardChip	
Responsibilities: <ul style="list-style-type: none">• Primary color is transparent• Secondary color selectable	Collaborators: <ul style="list-style-type: none">• Board• BoardModel

<ul style="list-style-type: none"> • Draw item on screen 	<ul style="list-style-type: none"> • BoardItem
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State <Abstract>	
Responsibilities: <ul style="list-style-type: none"> • Execute • onExecuteComplete • changeState 	Collaborators: <ul style="list-style-type: none"> •

ApplicationState <Abstract>	
Responsibilities: <ul style="list-style-type: none"> • 	Collaborators: <ul style="list-style-type: none"> • State

TitleScreenState	
Responsibilities: <ul style="list-style-type: none"> • Game menu selection (based on user input) • Will handle what state to go next • Display some current settings (AI difficulty level, number of players?, Colour setting) 	Collaborators: <ul style="list-style-type: none"> • ApplicationState

SettingState	
Responsibilities: <ul style="list-style-type: none"> • Sets the window width • Sets the window length • Sets the colour style • Sets board size • Sets computer difficulty (if playing AI) 	Collaborators: <ul style="list-style-type: none"> • ApplicationState

GameState	
Responsibilities: <ul style="list-style-type: none"> • Iterates between player turns. 	Collaborators: <ul style="list-style-type: none"> • ApplicationState

<ul style="list-style-type: none"> • Template pattern: <ul style="list-style-type: none"> ◦ Sets up the board ◦ Play game, starts the state machine to play the game. Also known as the game algorithm. ◦ Clear board • Debuggable via command lines 	
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Settings	
Responsibilities: <ul style="list-style-type: none"> • WindowSize • ColorThemes (eg. Color blind mode, 5 shades of red <easter egg>) • GameType (Eg. Connect4 or OTTO) • GameMode (Eg. Single player or multiplayer) 	Collaborators: <ul style="list-style-type: none"> •

PlayerTurnState	
Responsibilities: <ul style="list-style-type: none"> • Change game board • Check player moves are valid (hint for contracts here!) 	Collaborators: <ul style="list-style-type: none"> • GameState

GameCompleteState	
Responsibilities: <ul style="list-style-type: none"> • It'll edit the scoreboard, displays winner or loser. • Shutdown the game so another one can be started. Ie. Leave the GameState and go back to the ApplicationState. 	Collaborators: <ul style="list-style-type: none"> • GameState

Game <Abstract>	
Responsibilities: <ul style="list-style-type: none"> • Compute the winner using the 	Collaborators: <ul style="list-style-type: none"> • BoardMatrix

BoardMatrix <ul style="list-style-type: none"> • Randomly choose player (for starting) • Takes a list of players • Takes board settings' • Settings? 	<ul style="list-style-type: none"> • Player • Settings • GameState
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Connect4	
Responsibilities: <ul style="list-style-type: none"> • Created using the factory classes • Defines the rules for playing connect4 	Collaborators: <ul style="list-style-type: none"> • Game

TOOT/OTTO	
Responsibilities: <ul style="list-style-type: none"> • Created using the factory classes • Defines the rules for playing connect4 	Collaborators: <ul style="list-style-type: none"> • Game

Player <Abstract> - Jose	
Responsibilities: <ul style="list-style-type: none"> • Get move • Set Player Name • Get Player Name • Scored • Get Score 	Collaborators: <ul style="list-style-type: none"> • Game • Board • GameState

LocalPlayer - Jose	
Responsibilities: <ul style="list-style-type: none"> • Get move via keyboard or mouse • Get key press (returns new position) • Get mouse click (returns new position) 	Collaborators: <ul style="list-style-type: none"> • Game

AIPlayer - Jose

Responsibilities: <ul style="list-style-type: none">• Get move via computation	Collaborators: <ul style="list-style-type: none">• Game
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