

CRC Cards:

Board	
Responsibilities: <ul style="list-style-type: none">• Draw Board	Collaborators: <ul style="list-style-type: none">• BoardMatrix• BoardItem

BoardMatrix	
Responsibilities: <ul style="list-style-type: none">• Matrix• Iterators	Collaborators: <ul style="list-style-type: none">• BoardItem• Board

BoardItem	
Responsibilities: <ul style="list-style-type: none">• circleColor• squareColor• paintEvent	Collaborators: <ul style="list-style-type: none">• Board• BoardMatrix

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)	Collaborators: <ul style="list-style-type: none">• ApplicationState

<ul style="list-style-type: none"> • Will handle what state to go next • Display some current settings (AI difficulty level, number of players?, Colour setting) 	
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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. • 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 	Collaborators: <ul style="list-style-type: none"> • ApplicationState

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:	Collaborators:

<ul style="list-style-type: none"> • Change game board • Check player moves are valid (hint for contracts here!) 	<ul style="list-style-type: none"> • GameState
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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 BoardMatrix • Randomly choose player (for starting) • Takes a list of players • Takes board settings' • Settings? 	Collaborators: <ul style="list-style-type: none"> • BoardMatrix • Player • Settings • GameState

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 	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