

Team redpanda: Sprint0

University of Toronto Mississauga, CSC207 Assignment 3

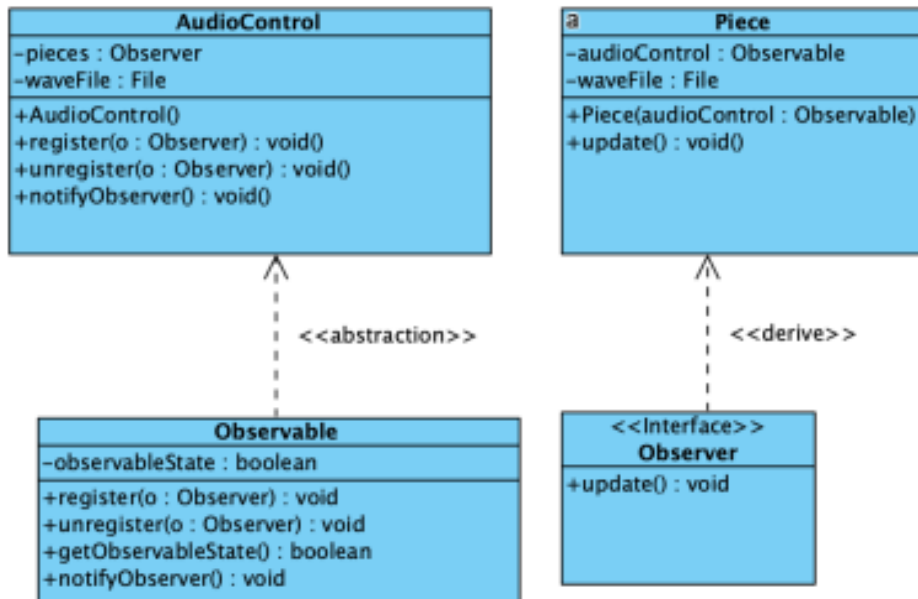
DATE: Sunday, November 21st, 2021

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1. Observable pattern



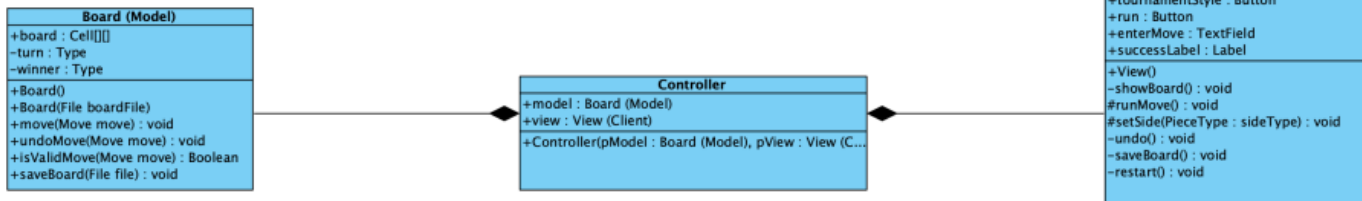
Description:
 How does the Observer Pattern Work?
 The Observable AudioControl updates each Piece by updating its waveFile attribute with the File present in the Observable waveFile attribute. It does so by calling notifyObserver()

What does it solve?
 It simply adds entertainment value to the game, as most games have sounds.

2. MVC pattern

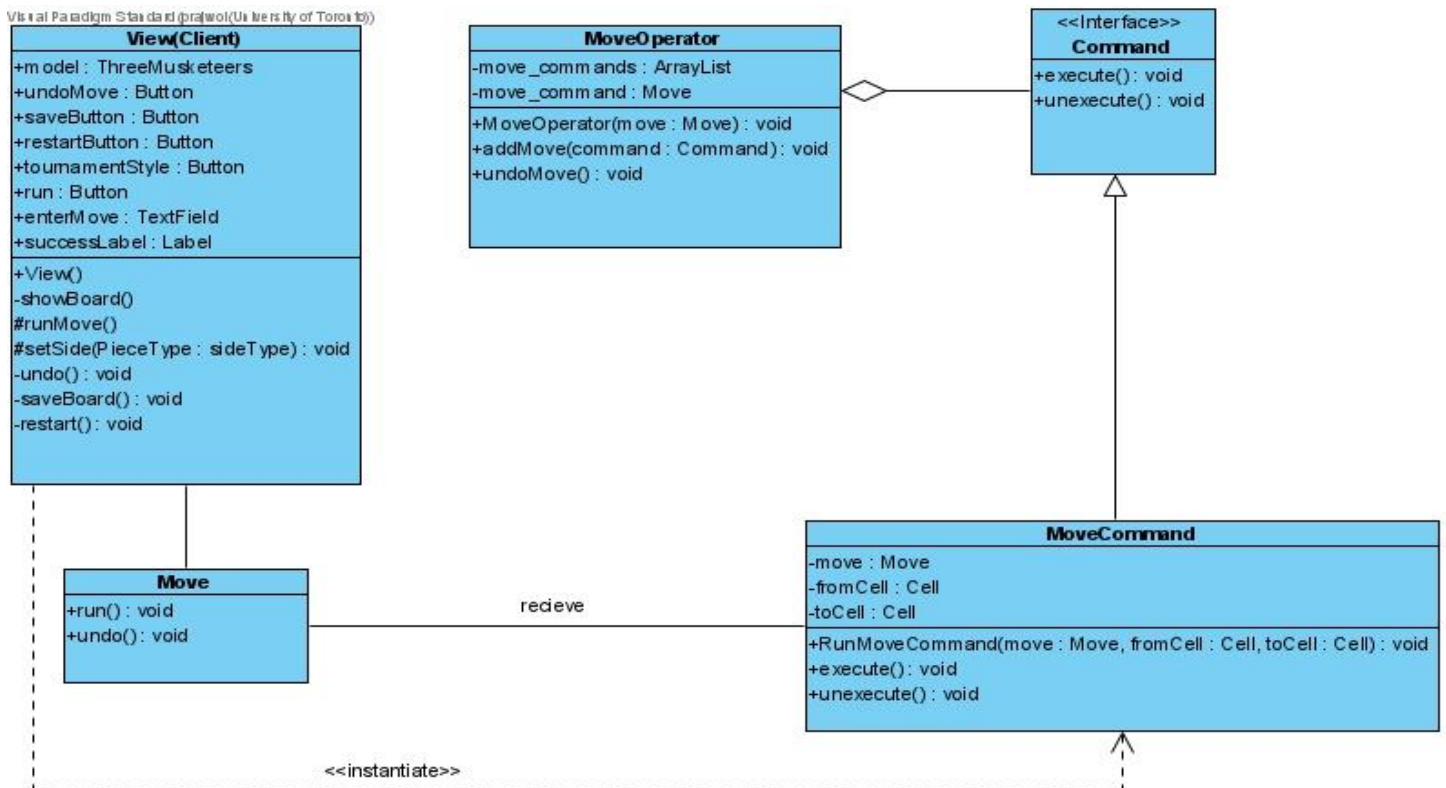
Description:
 How does the MVC Pattern Work?
 successLabel is added to the View of our GUI which is a Label that indicates whether the move was successful or not. When a user clicks on a cell. The handle function of the boardPanel that we create for our GUI will set an attribute of our boardPanel class with "Success" or "Fail". In the updateCells() function of our boardPanel GUI, we will set the view successLabel attribute to the new boardPanel variable we just created.

What does it solve?
 This allows the user to know whether their move failed or succeeded. They will not be clicking aimlessly on the screen



3. Command Pattern

Visual Paradigm Standard (pajwol/U niversity of Toronto)



What does it do :

The Command Pattern is used here to run and undo move commands in the board.

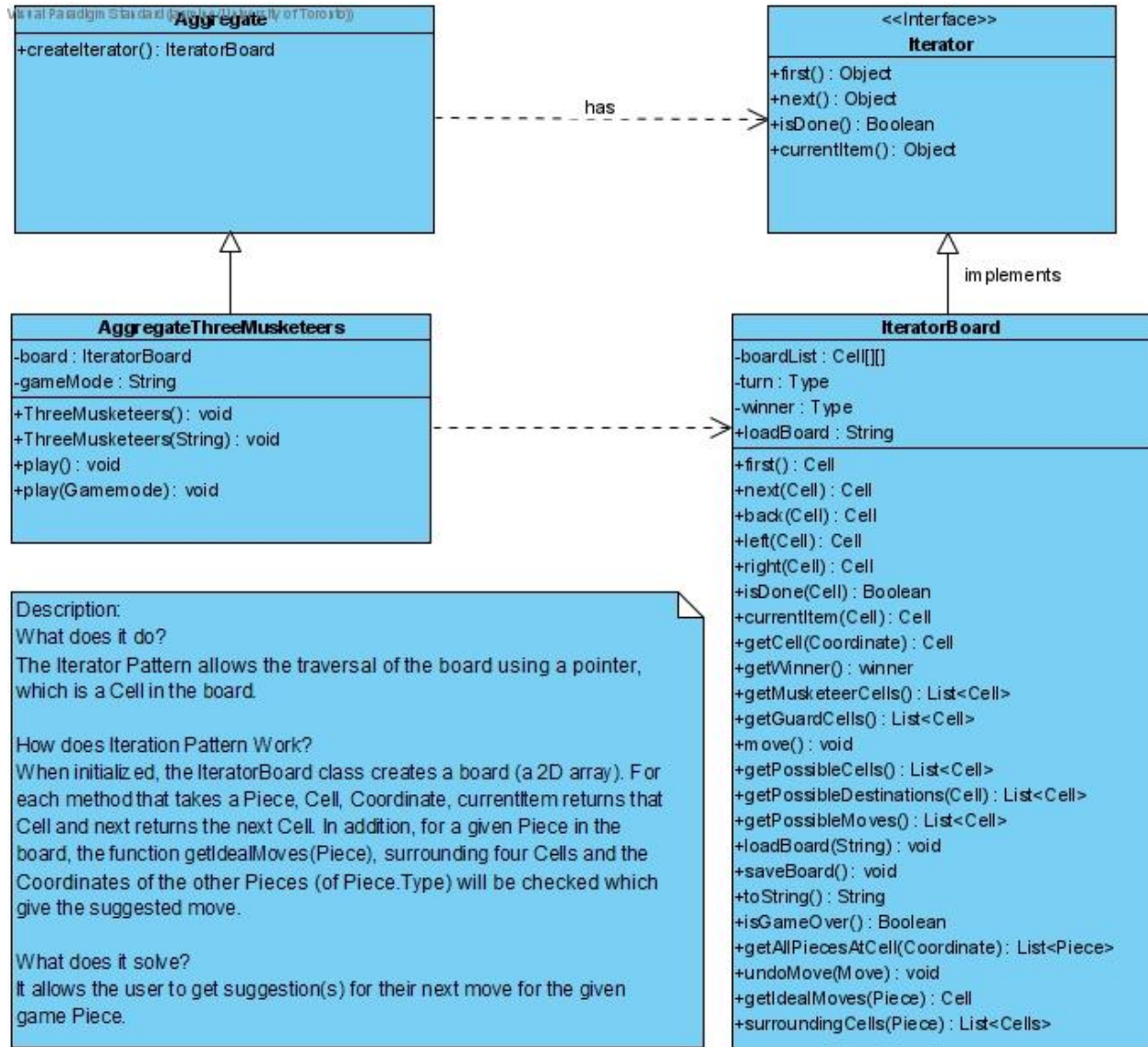
How does it work:

Here, the view(client) asks for a command to be executed when the user presses the buttons, run or undoMove. Then, a MoveCommand is created from the user inputs. The MoveOperator(Invoker) takes the new MoveCommand, encapsulates it, adds it to the move_commands list and calls the execute method and then the Move class performs the operations. When the undo operations are called the invoker removes the last performed move.

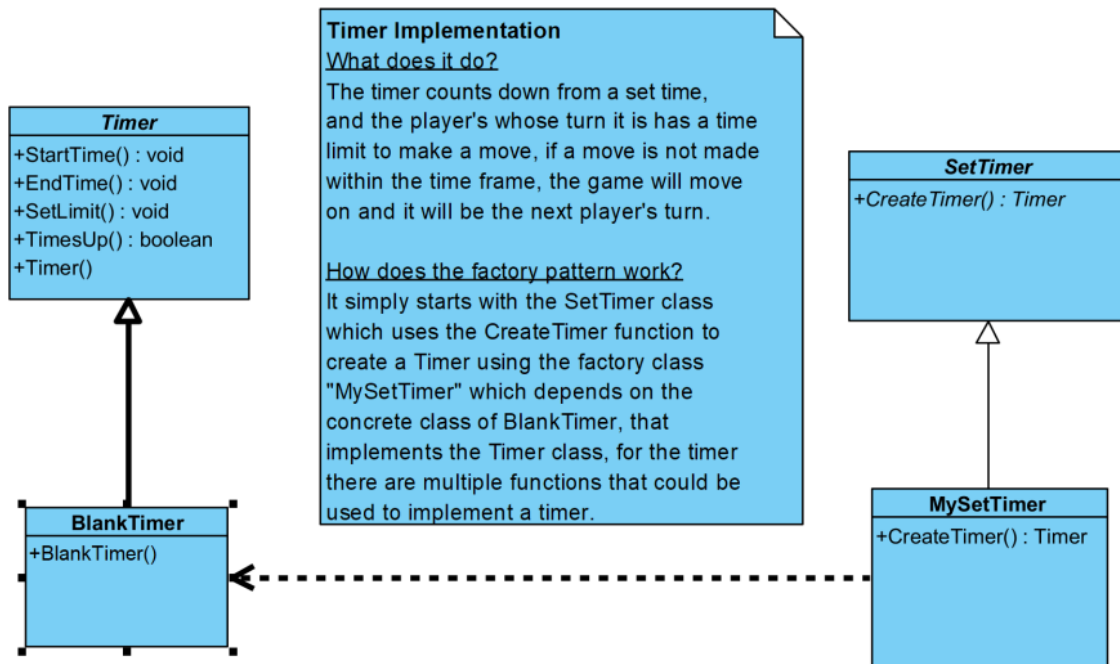
What does it solve:

It allows for encapsulating the commands and storing them in a list, or undoing the last command.

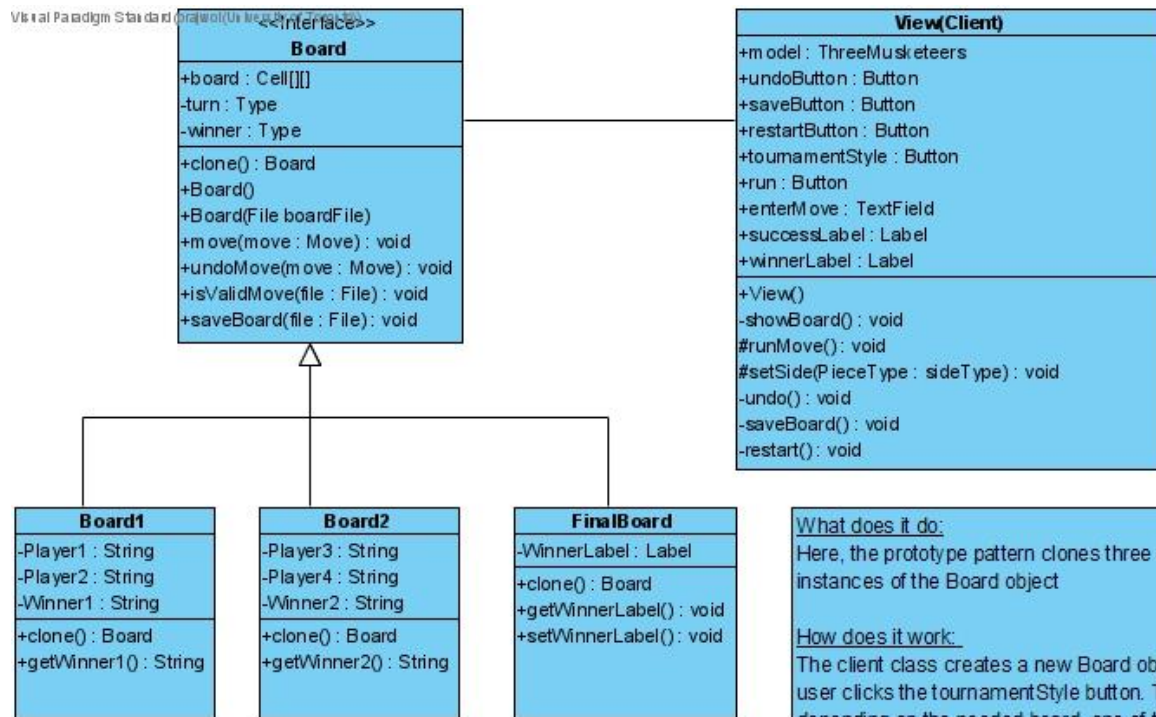
4. Iterator Pattern



5. Factory Pattern



6. Prototype Pattern



What does it do:

Here, the prototype pattern clones three custom instances of the Board object

How does it work:

The client class creates a new Board object when the user clicks the tournamentStyle button. Then, depending on the needed board, one of the boards will handle the cloning and makes a new instance of itself.

What does it solve:

It allows for more people to participate in the game and also using the prototype pattern uses less computer resources.