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### Chips Challenge Homework

Pattern Name: Observer	
Class Name: Monster	Role in Pattern: Observer
Monster	Observer
Chip	Observable
Purpose: To allow the monsters to be able to move and follow Chip's movement as the user moves Chip over the board.	

Pattern Name: Facade	
Class Name: ChipMovement	Role in Pattern: Facade
ChipMovement	Facade
Left, Right, Up, Down	Subsystems
Purpose: To allow there to be one interface that allows for Chip to move across the board when the user wants.	

Pattern Name: Singleton	
Class Name: Chip	Role in Pattern: Singleton
Chip	Singleton
MainGame	User of Singleton
Purpose: To allow for only one Chip to be on the board at a time and so that when Chip moves, the location and image gets updated while also removing the old image of Chip.	

My final design utilizes the three design patterns above to complete Chips Challenge. I decided to use the observer pattern to be able to have the monsters follow Chip around the board when the user moves Chip. I thought that this would be the best use of this pattern and also would be the best way to be able to have the monsters follow Chip around so that we could introduce a challenge into the game. I also used the Façade pattern so that there would be an easy way for the code to move Chip, with the façade pattern having one interface where the code can attach to allow for code that is a subsystem of this façade to be executed. I believe that this pattern was best used for moving Chip for exactly this reason. Lastly, I used the singleton pattern so that there would only be one Chip on the board at all times and that the old image of Chip would be removed and updated when the user wants to move Chip across the board. Lastly, if I could have started all over and done this assignment again from scratch, I would have implemented the strategy pattern with the Grid class so that the second level and first level of the grids could have extended a parent Grid class. This would make for a more extendable game in the future so that new "if" statements would not have to be written for more levels of the game.