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Software Development 1  
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## Project 2 Final Write-up

### Abstract:

World of Warcraft Guess Who is a computer version of the classic board game Guess Who that uses characters from the MMO World of Warcraft. The user interacts with the computer through text to play the game. There is one game mode which randomly assigns the computer a character and the user has to ask about traits and guess the computer's character. To win the game, the user correctly guesses the name of the randomly assigned character the computer has.

I chose to do this project because I enjoy the game Guess Who and wanted to make a version that used World of Warcraft characters instead. The system uses a character class, to keep track of the characters and their attributes, and a game file, to run the game functions. The purpose of this project is to turn the board game experience into a computer game. There is only one game mode; the computer is assigned a character randomly and the user would have to ask questions and guess names in order to win. This application is run in the eclipse workspace and uses text input from the user to play each turn of the game.

The system for my game will take user input and play the traditional board game as if the computer was another player. In the Character class there are methods to flip the characters up and down, as well as methods to retrieve information on characters or their traits. The Guess Who class runs the game, sets up the board, and creates instances of all the characters. Each class has a UML diagram below:

Character
+CharacterName: String +Faction: String +Race: String +Class: String +Gender: String +up: boolean
-flipDown() -flipUp() -status() -getFullInfo() -getName() -hasTrait(String trait)

GuessWho
+gameWon: boolean +trait: String +help: String +userAns: String
-charWithName(Character board[], String name) -traitList(Character board[], String trait) -flipWithTrait(Character board[], String trait) -flipWithoutTrait(Character board[], String trait) -printBoard(Character board[])

The system should be used as a user vs. computer game where the computer is honest and fair in its answers to the user's questions. When the player is asking about a character or a trait, the computer will answer honestly about its randomly assigned character and is therefore unable to cheat. The program is run through the Eclipse workspace, and the user interacts using typed commands.

At the beginning of each turn, the computer will prompt the user to enter a command, either "name," "trait," or "help." The name command indicates that the user is going to guess the name of the computer's character. If the name is an incorrect guess, the game flips that character down, or removes their name from the array game board. If the guess is the correct name, then the loop ends and the user wins the game. The trait command indicates that the user wants to ask about a specific trait of the character. After this command, the user enters a specific trait such as "alliance" or "warrior." If the computer's character has that trait, then all characters that do not have that trait are flipped down. Otherwise, if the character does not have that trait, then all remaining characters that do have the trait are flipped down. The game board is displayed after each turn. The user can use the help command to ask about a character or a trait. If they ask about a character, then the attributes of that character will be displayed. If the user asks about a trait, then all the characters with that specific trait will be listed.

Initially I had planned on having a second game mode where the user could choose a character for the computer to guess. I was unable to find a way to create this game mode in time. I also planned on creating a GUI with a visual representation of the board, but I did not figure it out in time. There are not many examples of java code for Guess Who games that are available to the public. The only text I was able to use was the textbook for the class to create the game.

The goal of the system is to operate as a functional and fair Guess Who computer game that uses World of Warcraft characters. The system plays a fair game of Guess Who with the user by answering questions about the assigned character to narrow down the possible options. Users interact with the game by entering text commands when prompted, and if a user enters an incorrect command, the loop will try again until valid information is entered.

### Works Cited

Liang, Y. Daniel. *Introduction to Java Programming: Comprehensive Version*. Boston: Pearson, 2015. Print.