Object:Assignment 3(Board game)

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In this assignment we are supposed to develop a board game.In this game we have two sides calliences and zordes. The parties in the game moves in order and every character in the game can move onto one cell in one step.In every side there are 3 thypes of characters. Human , Elf and Dwarfs are on Callience side; Ork,Goblin and Trolls are on Zorde side.Each character can attack the other side characters and can die if their hp become zore. The game continues until all characters on one side die .The other side wins.To initialize our game first we need to create a game board and characters. We reach the game board size and all characters from the initials.txt file. To read and creating board and characters I create a Board class. In initialBoard() method I read the initials.txt file line by line and than when I reach the size of board I create it. To use “**” and “*” as a border of my game board I increase the board size 2 more. Than I add “**” and “*” in my game board.In the Board class I have calliences , zordes and characters array lists. I use characters list to store all character objects.In the other 2 list I stored calliences and zordes ids. I use them when I want to know whether a cell is occupied by enemy or not. After that I start creating character objects. I create all characters according to its type. While creating I add them onto my game board according to their initial location and I set their location information as an attribute. Also I add their id my zordes or calliences list. After creating characters I sort characters array list respect to their id. To sort this list I create getId() method and I override it all character classes. In Board class I have printBoard(int s) method. If s is 0 this method prints the current situation of game board and characters. Before printing to check dead characters I use gameCheck() method which is also inside the Board class. This method checks every character in the game and if characters hp is zero it deletes this character from character list and game board. If s is 1 it means there is an move sequence error. If s is 2 it means there is an boundary error. Before quit from this method I call winCheck() method which is also inside the Board class. This method counts the current number of characters from Zordes and Calliences.If one of them has zero character it means game is over.After initialize the game I start following commands. To do that I creat Commands class. In this class I have range and elfRange list. In range list I stored where can characters attacks on the board as a string like “xy” . elfRange is like range list but it is special for elfs so it stores more locaiton than range list. While I read the commands.txt file first I turned movement directions into integer than in loop I start following commands. While following commands I use nested if blocks. First I check errors than if there is no error I move the character. If error occurs I throw my custom exception.

There is some special moves for some characters like orks can heal their teammates and itself. Elfs can attack more location in their last move or human can only attack the last move. According to these features I follow commands seperatly for each types. To find range of character I use setRange() method.This method takes a character as a paramater and finds normal attack range for this character. Also setElfRange()takes elf as a paramater and finds its special attack range. To change the current location of character and attack enemies I use locate() method. This method takes a character, a movement list, vertical and horizontal values of location as a parameter. First it changes the location of characters than finds its range and attacks all enemies inside this range. elfLocate() method works like this method it has just different range.There is also fightToDeath() method in the commands class. This method used when a character move onto to enemy character. This method takes a character, a movement list, vertical and horizontal values of location as a parameter. First it attack once to defender character than it compare current hp values of these characters and one of them (who has more hp) survives. For characters I create a Character class which is super class of all other character classes. It has id(string),location(int[]) and hp(int) attributes, one constructer and some methods. The setLocation() method takes 2 integer, these are vertical and horizontal component of character's location and getLocation() method returns location as a string.As I said before I used getId() method to use it while sorting characters respect to their ids. Also there are some methods in the Character class which I override into the subclasses like attack(),setHP(), getHP(). I have Zorde and Callience as subclasses. They used super class constructer. Zorde class is also superclass of Ork , Goblin and Troll classes. Callience class is also superclass of Human , Elf and Dwarf classes. All of these subclasses override attack(), setHP(), getHP() methods. setHP() method takes integer as a parameter and increase or decrease character's hp according to this value. attack() methods takes a character as a parameter and using the setHP() method decrease its hp.getHP() method returns the current hp of character.Just Elf class has rangedAttack() method. It works similar to attack() method.In my Main class first I collect args into myArgs list to use them when I want to reach file names into other classes.Than I call initialBoard() method to initialize game and than I print initial board. Than I start following commands.