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TrailMix APCS1 pd 1

Adrian Boylan, Elaina Chung, Vernita Lawren 01-05-2016

Final Project Proposal

Strategic Battle Game

In this game, the user controls a team to try to defeat a team of “monsters” controlled by the computer. Each character—on both the user’s team and the monsters—have an attack range and a movement range. Monsters will move as close to the user’s players as possible and have a short attack range. The user can pick players on their team with specific ranges, for example a character with a longer movement range but a shorter attack range or a character with a shorter movement range but longer attack range. Each character will have an hit point value and when that value hits zero, they die. The user’s team’s attacks chosen each take up energy, which is part of an energy pool that replenishes after each round. Each round has a random order of moves from players on both teams. The difficulty of the game will change with the level that the user chooses at the beginning of the game, including characteristics of the characters (hit point values and attack power) and the environment.

[This game is based on ‘Ge.Ne.Sis’ by Armor Games. The game can be found at http://armorgames.com/play/4707/genesis. The strategy guide for the game that will be referenced can be found at http://cache.armorgames.com/misc/guides/genesis/.]

There would be a main character class that has the attributes and method that both the monsters and the players have, such as HP and attack. Then, there would be the subclasses monsters and players. The monsters class would have two subclasses called minion and boss. The players class would have subclasses of different types like archer and knight. As we go down into the subclasses the methods would be more specific.

This game will use a 2D array to keep track of character’s whereabouts and spaces where the characters can and cannot move. The 2D array would represent the board. With each of the user’s turns, the system will print out an ascii version of the array showing where each character is and where the character whose turn it is can move. The “monsters” will move in the direction of the nearest player by comparing their distance (number of empty spaces) between themselves and each player. Users can also choose a level that will affect the monsters’ hit point start values and attack power, the character’s attacks and attack power, the maximum amount in the energy pool, and amount of movable space on the “board”. Each round will allow for each character to have a turn; each turn will allow the character to move and if a monster is

in the attack range of the character, to choose to battle. Each battle lasts for a number of attacks, not necessarily stopping only once one character is defeated. Each of the user's characters' attacks take up energy, which is bound by the energy pool shared by all the user's characters.

We would use the Scanner or Keyboard class to ask the user where they want to move, what attack to use, etc. The 2D-Array would be made up of Strings, and attack/movement spaces would be shown by making them a different symbol from the blank spaces, character spaces, and environment spaces. Movement would be done with a simple swap method and attacks can be carried out by calling the receiver's setHP method.