BREAKPOINT CODING CHALLENGE

Collections

Dungeon Crawler

In this challenge, you will allow the user to enter the name of 6 adventures. After that, the application will run with no more user interaction except advancing the application when you pause it.

Enemy Set-Up

- Create a collection to store the enemy types that the adventures will battle in the dungeon as well as a randomly generated amount of damage the enemy will do
    - Example: A goblin will do from 12 to 18 damage. A troll will do 25 to 32 damage.
- Use a STACK to create an "enemy deck" that is randomly populated from the enemy type collection you created. An enemy type will show up multiple times in the deck
    - Example: troll, goblin, goblin, bandit, warlock, bandit, troll…
- Create a collection to store the name of a location where the character can not do battle
- Create a collection to store the name of an enemy type that character can not fight

Dungeon Map Set-Up

- Create a collection to store the name of location types as well as a randomly generated number of enemies found at that location
    - Example: Dungeon Entrance will have 1 to 3 enemies, Throne Room will have 5 to 8 enemies
- Create a QUEUE to store the order of locations that will be traveled by the adventurers. The same location type can show up more than once
    - Example: Dungeon Entrance, Hallway, Crypt, Hallway, Throne Room…

Character Set-Up

- Create a collection to store the name of the six adventurers entered by the user.

- Create a collection to randomly generate a hit point value for each character
    - Example: “Tron” has 50 – 100 hit points, “Bear” has 50-100 hit points
- Create a collection to store the name of a location where the character can not do battle
    - Example: Bear can not do battle in the Throne Room
- Create a collection to store the name of an enemy type that character can not fight
    - Example: Tron is useless against Trolls

Automatic Game Play

After the player enters the character names, the game plays automatically, following these steps.

- Characters enter the first location in the QUEUE and are informed of the number of enemies they will battle
- An enemy is drawn from the enemy deck
- A random character is chosen to fight the enemy
    - If that character can not fight in the current location or can not fight the current enemy type their hit points are reduced by the enemy damage value
    - Otherwise, the character defeats the enemy.
- Another enemy is drawn from the deck, and the process repeats for every enemy in the current location.
- If the hit points of any character reach zero, that character is dead and can no longer fight.
- Once all the enemies are defeated for the location, the characters move to the next location.
- Whenever the characters change location, the hit points of the characters are displayed.

Battle Rules

A character does not have to battle the same enemy if they have taken damage by that enemy.

A character does not have to battle in the same location if they have taken damage in that location.

End Game

If at least one character has survived to the end of the dungeon, the player wins.

If all of the characters die, the player loses.

Either scenario should prompt the user to play again.