

Dungeons Without Dragons | RPG Game Project

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I have decided to work on the project Dungeons without Dragons project individually due to many reasons. When glancing over the four possible project options, the RPG project was the one that stood out the most to me because of its room for creativity. My approach to this project was to manipulate the console's text abilities to produce a visual representation of the map through a retro-styled top down view. The process of creating a game engine to support such graphics was complicated and time consuming as the windows console is not built for this functionality. Nevertheless, through debugging and tweaking I have been able to create a reliable 2D graphics engine to use in the game with minimal graphical bugs. Because of the risk involved in trying to display graphics in the console, I wanted to work on the project alone; it would have been nearly impossible to coordinate with peers on the game.

At the beginning, the game had too many bugs too count. The entire screen would produce a flicker between every movement, text would be duplicated, colors were not showing up correctly, etc. Through my approach of creating functions for displaying different aspects of the screen, I was able to debug these issues rather quickly having already known where the error would be occurring (with almost 1500 lines of code, the use of functions is very important). I have used inheritance for the different characters in the game. My base class is called *Character* and the derived classes from it are *NPC*, *Player*, and *Enemy*. My *Screen* class serves as a main class as it contains all the graphical functionality, for that reason, it became the class where I would control parameters of all sorts such as: The current level, pause menus, duels (fights), etc.

There is a main menu allowing the user to load a game, or to start from scratch. The first level (which I call the garden) contains only a path to allow the player to familiarize themselves with the movement

mechanics of the game (arrow keys). The yellow icons are dialog points, the user can walk up to them and a help dialog will appear in the screen acting as a tutorial. After every step the user takes, there is a 1 in 25 chance of an NPC joining the player's party, and a 1 in 20 chance of encountering an enemy and starting a duel. In a duel, the enemy will deal up to 10 damage to each NPC and $(9 * \text{level})$ damage to the user. After each level, the enemy gets stronger with more health and more damage. After defeating an enemy, there is a 1 in 3 chance that they will drop a key for the player to move on to the next level. After getting through all four levels, the game is won!

The player can save and load the game at any time except whilst in a duel.

To run the game please click on the .EXE file provided.

This program is only compatible with Windows (Due to its console graphics)

You must have .NET Framework 4.8 Runtime installed to run the game (can be downloaded [here](#))

Please contact me for any issues with running the program at: fnocioni@uh.edu

Thanks for playing the game!