**I made a console rpg game using only c ++ code**

**When you run the exe file, the console starts and gives the player a choice of actions**

**By choosing the third option, the game closes**

**By choosing to continue, the player will not be able to do this, since before that he did not start playing and, accordingly, there is no progress, so it is impossible to continue. So the player sees an inscription stating that he cannot do this.**

**So the player chooses to start a new game**

**Next, the player needs to choose the difficulty**

**Normal difficulty gives the player an unlimited number of lives and, accordingly, attempts to complete.**

**Hardcore is a game in which the player has only one life, if he loses it, he needs to start the game over. This adds more interest to the game for the player.**

**The next stage of the game is the choice of further actions.**

**The player is provided with basic information about the levels and health of the player and the enemy.**

**You can check the characteristics of the character. The characteristics are distributed randomly throughout the course of the game.**

**When attacking an enemy, everyone loses health depending on the opponent's attack**

**If the player's character does not die after the first exchange of blows, then he is given the opportunity to restore health, but for this, a certain amount of experience is removed from the character. At the same time, the amount of experience cannot fall below 0.**

**There is also an opportunity to continue the battle without losing experience, for this the player must continue the game, while health will not be restored.**

**Experience is given for killing an enemy. The higher the level of the enemy, the more experience is given to the player.**

**In the game, with a certain probability, you can meet a boss. The boss has the same or one more level than the character, he also has more health and other characteristics than ordinary opponents of the same level. Defeating him is more difficult, but for defeating him, many times more experience is given.**

**When dying on hardcore, the player has the option to either start a new game or exit the game.**

**Escape makes it possible to change the enemy, the higher the level of the character, the higher the level of opponents.**

**When fighting a boss at the first levels, you will often have to restore health after each battle. As the level rises, each of the characteristics is randomly increased. If the player scored more experience points than necessary, then these points are saved. If there are enough points, then the character can raise several levels at once. When the level is raised, health is restored and is equal to the maximum.**

**The higher the level, the easier it is to deal with opponents of the first levels.**

**Upon death on normal difficulty, the player regains maximum health, but loses a significant amount of experience. The higher the level, the more experience points are removed.**

**The game has added two combinations that are currently active in order to demonstrate the performance of some features. The first allows you to close the game at any time.**

**The second combination makes it possible to increase the character's level by as many units as will be indicated after entering the combination.**

**As you can see, the level of opponents has also increased.**

**The amount of experience that is necessary to increase the level at the first level is 10 units and with each level this amount doubles, but at the same time at a certain moment the amount of the required amount of experience reaches the maximum and will not increase any more, since it is already extremely large, and int has a limited value, after which errors can occur, so this value is 10 times more than the maximum required amount of experience, which is an insurance against mistakes.**

**When entering a number that is not on the list, the player is told that something is wrong and is given the opportunity to re-enter the number without any consequences.**

**The player has the opportunity to return to the main menu, where he can continue the game, start a new game, or exit the game.**

**Now let's start parsing the code.**

**The first int can have any initial value and this will not affect the game in any way, they are necessary for the functions that will be further to work.**

**The next three int affect the balance of the game, depending on their value, the probabilities of some events will change.**

**Next comes the character class. It is required for the character creation function. This function is responsible for the creation of the first level character and the random distribution of characteristics. and for further assignment of the obtained values ​​to int, which will be necessary for calculations and information output.**

**Next up is the level-up function, which randomly boosts every stat of the character. The function has conditions that are both the limit value of characteristics and insurance against exceeding the maximum value of int.**

**The class of the boss and the enemy and the function of creating opponents are almost the same, but they additionally include and commented out the code that is responsible for showing the characteristics of the enemy. This is a helper code for the developer, as it helps to check the functionality of functions.**

**A condition is built into the function of creating an enemy, which will allow the boss to spawn with a certain probability.**

**An ordinary enemy has an increased probability of spawning at the same level as the character, the higher the level, the higher the value of the characteristics the enemy can have, but the number of characteristics still remains random.**

**The boss can spawn at least the same level as the character or one level higher, while he is an order of magnitude stronger than a regular enemy.**

**Attack function. I'll start at the end. while allows you to raise the level if you have gained the required amount of experience, the required number of times while displaying a message about raising the level.**

**If the character's speed is greater than or equal to the enemy's speed, then the character will be the first to damage. If on the contrary, the enemy will strike first. A distinctive feature is that the player has the ability to inflict a critical hit on the enemy.**

**If the enemy has lost all health, then the character gains experience, which depends on the level of the enemy. And the function is triggered, which creates a new adversary.**

**Next comes the health restoration function.**

**Provided that the player does not have maximum health and it is not less or not equal to 0, then the player will have the opportunity to choose to restore health or not. When choosing to restore health, the character loses twice as many experience points as the value of his level. In this case, the player cannot have less than 0 experience.**

**If you choose to continue, the next round of the battle will begin.**

**The combat function begins by checking the health of the main character and whether the difficulty is hardcore. If it is hardcore and the character has less than 1 health point, then the player is shown the choice between starting a new game or leaving the game. This is a cycle that only ends when one of the two options is selected.**

**If the difficulty was normal, then the character's health will be restored but the experience that he has will decrease.**

**If the character has health, then he will display basic information about himself and the enemy, as well as a list of possible further actions.**

**When you enter this combination, the game closes**

**When you enter 1, the attack, health regeneration, and combat functions are called (which is a function recursion).**

**When you enter 2, a new enemy is created and the character's health decreases, if it is 0 or less, the player will receive a death notification, and a large amount of experience will be additionally removed since this death is the player's carelessness, which is estimated worse than death during battles.**

**If you enter 3, more detailed information about the character is displayed.**

**Entering 4 brings up a menu where the player can choose to Start a new game, continue, or exit the game.**

**The function has a combination input that allows you to increase the level by the number that will be entered after this combination. This feature is known only to the developer and can be commented out before the release of the game so that the common player will definitely not have this opportunity.**

**All functions have either recursion or a loop so that the player has the opportunity to enter the correct number with an incorrect input without consequences.**

**Next comes the difficulty selection function. It changes the int of the number of lives. If int is 1, then the player has an infinite number of lives, and if 0, then only 1 life per game.**

**The menu function is similar to the one explained before.**

**And the main function contains a function that allows the random to really be random. Contains the creation of a character and an enemy of the first level and the actual launch of the menu.**