Project 1

<Text Based Adventure Game>

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7/15/2016

CSC-5-45276

**Introduction:**

This is a text based adventure game.

You are given a quest from the king to go out and slay a dragon.

The user has multiple options of what to do throughout the game.

For example if it is a fight scene then the user could choose to attack, or flee, or use a potion, or use a scroll.

The game ends if the player dies at any point or when the dragon is defeated.

**Summary:**

Project size: 295 lines

Number of Variables: About 24

This project has a lot of the things that we have learned throughout the chapters in the book and there is much room for improvement for the next project.

This took about a week because of how much nesting there is, pretty much the entire thing is nesting.

**Major Variables**

|  |  |  |
| --- | --- | --- |
| **Type** | **Name** | **Purpose** |
| Float | times | Count how many times the game is played |
|  | win | Count the wins |
|  | loss | Count the losses |
| Integer | hp | Keeps track of the user’s health |
|  | potion | Keeps track of the amount of potions the player has |
|  | scroll | Keeps track of how many scrolls the player has |
|  | dmg | The player does 10 damage |
|  | bandit | This is the bandit’s health |
|  | dragon | This is the dragon’s health |
|  | pclass | Keeps track of the class the player chose |
|  | random | The critical hit chance of the player |
|  | flee | The chance of a successful flee against the bandit |
|  | bdmg | Random damage from the bandit |
|  | ddmg | Random damage from the dragon |
|  | choice | What the user chooses to do during his turn |
|  | play | The option to play again |
| Character | name[51] | The player’s name |
|  | tip | The option to get a tip at the start |
|  | reason | Reason to leave the kingdom |
|  | help | If you should help the traveler |
| Boolean | again | If this is true the game is played again |
|  | left | If you fled the bandit this is true so that you get no reward |
|  | jerk | If you didn’t want to help the traveler then fought the bandit this is true so that you get less of a reward |

**Constructs**

|  |  |  |
| --- | --- | --- |
| **Construct** | **Purpose** | **Lines** |
| cin.getline | Gets the user’s name | 28 |
| For loop | Repeats the game if the user wants | 29 |
| switch | Choose a class, choose what to do in a fight, choose to play again | 43,118,207,279 |
| case | The options for the switches listed above | 44,50,56,62,119,126,133,146, 208,215,220,233,280,281 |
| += | Add damage, add health, add potions, add scrolls | 47,53,59,65,136,178,180,223 |
| - = | Subtract health, scrolls, potions | 100,122,124,143,151,158,165, 211,213,218,230,245,253,256,260 |
| Increment ++ | Add scrolls and potions | 48,54,60,66,89,90,170,186,188, 266, 272 |
| break | Break the switches | 48,54,60,66,122,124,130,131,139, 143,154,158,211,213,218,226,230, 241,245,280,281 |
| default | To not let extraneous inputs mess up the program | 68,161,248 |
| Ternary operator | To decide whether or not to give a tip | 74 |
| If else | What the guard says, damage that you do, if flee worked, using potions and scrolls, the dragons damage, whether or not you win | 85,91,120,123,127,131, 134,140,147,155,209,221,227, 234,242,251,254,257,264,268 |
| Equality operators | For the switches and if else statements and loops | 29,74,85,96,102,105,110,111,112, 113,120,127,173,182,198,199,200, 201, 209,263,264 |
| srand | Random seed | 104 |
| while | Loop for fighting the bandit | 105 |
| Setprecision(0) | Makes sure there are no decimal places | 107 |
| Independent if | When to displays what options | 110,111,112,113,163,173,182, 198,199,200,201,250 |
| Rand() | Chance for critical hit, damage from the bandit, chance to flee, damage from the dragon | 115,116,117,204,206 |
| Arithmetic operators | Add damage for critical hits | 122,211 |
| - = | The user, bandit, or dragon losing health | 100,122,124,143,151,158,165,211, 213,218,230,238,245,253,256,260 |
| Decrement -- | Losing potions and scrolls | 138,152,225,239 |
| Do while loop | Keep the fight with the dragon going, dragons minimum damage is 5 | 194, 203 |
| myfile.open | Opens the file | 285 |
| myfile | Writing to the file | 286,287,288 |
| myfile.close | Closing the file | 289 |