CSCE 2004 – Programming Foundations I
Programming Project Report

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Academic Integrity Statement: I pledge that I have neither given nor received unauthorized help on this programming assignment.

This programming assignment aimed to use a class to make D&D characters. The program had multiple inputs including the name, class, level, inputs for editing the character, and inputs for saving and scraping the character. All inputs besides name were error-checked with do-while loops to ensure that user input was valid based on what was asked. The program had multiple outputs, but the majority were used to print the contents of the character class.

We used a Character class to hold information about different characters. Also in the main program, a do-while loop was used to ask the user how they would like to implement their character which would run until the user said they were done with character creation. A few more different types of loops were used for smaller things in both the main file and the character functions file.

I was given the starter code for the character class declaration and two other .cpp files, outlining what the program should do. Along with this, I was also given a .txt file for all the spells. One .cpp file contained comments on how the program would work and some testing of character functions. The other .cpp file was used for the skeleton methods of the character class with a few methods already implemented.

I tested the program incrementally to make sure everything worked step by step. This required lots of debugging as I went along but it was nice to know I wouldn't have to check everything all at once. Here are a few test inputs below:

Test for error checking on level:

```
What would you like you character's class to be?
NOTE: You can only choose to be a Fighter, Rogue, Wizard, or Cleric(only a Wizard and Cleric are spellcasters)
Cleric
What do you want your character's level to be?
Note level must be inbetween 1 and 20 inclusive
21
Note level must be inbetween 1 and 20 inclusive
```

Test for error checking on single character input:

```
        Frostbite
Are you happy with your character, if not you may regenerate stats and hitpoints or generate a new spells list
NOTE: Answer must be 'R' for  regenetating stats, 'N' for new spells, or 'O' for okay
c
NOTE: Answer must be 'R' for  regenetating stats, 'N' for new spells, or 'O' for okay
```

Test for allowing multiple stat entries:

```
stat entries are as follows: 1.Strength, 2.Dexterity, 3.Constitution, 4.Intelligence, 5.Wisdom, 6.Charisma
NOTE: All stats must be inbetween 8 and 20
8
8
8
8
8
8
```

Test for error checking on string input:

```
Cameron
What would you like you character's class to be?
NOTE: You can only choose to be a Fighter, Rogue, Wizard, or Cleric(only a Wizard and Cleric are spellcasters)
Pirate
NOTE: You can only choose to be a Fighter, Rogue, Wizard, or Cleric(only a Wizard and Cleric are spellcasters)
```

Test for making sure to only generate new spells for characters:

```
NOTE: Answer must be 'R' for  regenetating stats, 'N' for new spells, or 'O' for okay
N
Your character is not a caster
```

Test for error checking on 'Y' or 'N' inputs:

```
Do you want to make another character
NOTE: Answer must be 'Y' or 'N'
g
NOTE: Answer must be 'Y' or 'N'
```

This project took me a very long time to do. Next time I would start earlier on it and pay more attention carefully to what each function wanted. The program works fine but I feel like with so many details there is a good chance that I missed something I was supposed to implement.