Computer Science Programming Coursework 2020/2021

Title: Dnd Creator-Inator

Name: Maya Rhoades

Student Id: N0901105

**Specification**

The Dnd Creator-Inator is a dungeons and dragons character creator. It loops through various menus to allow the user to choose their: name, class (1 of 6), race (1 of 6), armour (up to 4 options depending on the class), weapon (1 of up to 11 depending on class), profieceny skills (up to 4 depending on class of up to 18 depending on class) and apply ability skill scores (6 ability scores). Finally, the program outputs a complete character sheet. The sheet contains ability scores, their value, and a determined modifier (determined based upon the value of the ability score). The sheet also lists the health (the health roll plus the constitution modifier, of which is determined by the value of constitution), name, class, race, racial abilities (up to 2 and listed depending on race), armour type, weapon, skills list (lists 18 skills), and skill modifiers (modifiers determined based upon ability score values & which skills are connected to each score).

**Design & Implementation**

|  |  |
| --- | --- |
| Menu | Result |
| Main Menu | Allows the user to create character or exit |
| Race Menu | Allows user to choose 1 of 6 races (or display all info on all race). Then displays that race’s description and racial abilities. |
| Class Menu | Allows user to choose 1 of 6 classes (and/or display all info on all classes). Then displays class’s description. |
| Weapon Menu | Allows user to pick 1 of up to 11 weapons. Weapons to choose from differ by class. Then prints selected weapon. |
| Spells | If the class is not rogue, then prints line to check with DM for spells |
| Armour Menu | Allows user to pick 1 of up to 4 armour choices. Number of choices dependent on class |
| Proficient Skill Menu | Allows user to pick a certain number of proficient skills from a list of a certain length. The number of choices and the number of skills listed depend on the class chosen. |
| Health Menu | Allows to user to roll health. Rolls a number from 1 to either 8 or 6, depending on the class chosen. |
| Stat Menu | Allowed the user to roll a number and assign it to one of 6 ability scores. Loops until each score has a value and does not let the user assign a value more than once to any score. |
| Name Menu | Allows user to choose name for character. |
| Exit Menu | Allows user to exit |

Class Diagram

A picture containing text, screenshot, parking

Description automatically generated

Function Table

|  |  |
| --- | --- |
| Function | Description |
| readTwoLines(first,second,third) | Read 2 lines from the DndText file and printed them to either the display or the text file |
| readOneLine(first, third) | Read 1 line from DnDtext file and printed it to either display or text file |
| displayDes | Read and printed a section of DnD text file |
| rollHealth | Let user enter a menu to roll health from 1 to a max value |

**Test Plan**

|  |  |  |
| --- | --- | --- |
| Action | Test Method | Success Criteria |
| Main Menu | * Enter wrong number * Enter character * Try all valid options | Program copes with wrong values. Allows user to continue program or exit. |
| Race Menu | * Enter wrong number * Enter character * Try all valid options * Try menu for every race | Program copes with wrong values. Allows user to choose a race and displays correct race. |
| Class Menu | * Enter wrong number * Enter character * Try all valid options | Program copes with wrong values. Allows user to choose class and displays correct class. |
| Weapon Menu | * Enter wrong number * Enter character * Try all valid options * Try menu for every class | Program copes with wrong values. Menu works for every class. Displays correct choice. |
| Armour Menu | * Enter wrong number * Enter character * Try all valid options * Try menu for every class | Program copes with wrong values. Menu works for every class. Displays correct choice. |
| Proficient Skill Menu | * Enter wrong number * Enter character * Try all valid options * Try menu for every class * Try repeating values | Program copes with wrong values. Program copes with repeated values. Restart’s selection if repeated values. Menu works with every class and displays correct choices. |
| Health Menu | * Enter wrong number * Enter character * Try all valid options * Try menu for every class | Program copes with wrong values. Menu works for every class. Math functions properly. |
| Stat Menu | * Enter wrong number * Enter character * Try all valid options * Try repeating values | Program copes with wrong values. Program acts correctly if user tries to assign a second value to the stat. |
| Name Menu | * Enter wrong number * Enter character * Try all valid options | Program copes with wrong values. Menu lets user enter anything for the name. |
| Create Character Sheet | * Check all values that were chosen are correctly printed * Check that modifiers were correctly calculated * Check that all descriptions print for every race and class. | Every race, class, descriptions, and calculation print to the sheet correctly no matter the choices made. |
| Exit Menu | * Enter wrong number * Enter character * Try all valid options | Program copes with wrong values. Menu prints final message and exits |

**Demo**

A video demo is completed and attached.