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CMSC 215 / 6381

Assignment 2

09/08/2023

**UML Diagram**

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| --- |
| **Student** |
| studentName:String  creditHours:double  qualityPts:double |
| gpa()  eligibleForHonorSociety()  toString() |

|  |
| --- |
| **Undergraduate** |
| studentName:String  creditHours:double  qualityPts:double  stdYr:String |
| eligibleForHonorSociety()  toString() |

|  |
| --- |
| **Graduate** |
| studentName:String  creditHours:double  qualityPts:double  stdProgram:String |
| eligibleForHonorRoll()  toString() |

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| **Project2** |
| GPA\_CAP:double  avgGpa:double  students:Student[] |
| setGpaThreshold()  main() |

**Test Plan:**

This program comes with a .txt file that provides the list of names to be read in by the program. StudentInfo.txt provides 12 lines of information corresponding to 12 Student entries. The following is the data set from studentInfo.txt:

1. Jones, Tommy 72 230 Junior
2. Marshal, Sarah 32 120 Sophmore
3. Acheiver, Over 72 280 Junior
4. Uzomaki, Naruto 32 45 Sophmore
5. Uchiha, Sarada 90 360 Senior
6. Lohan, Lindsay 90 300 Senior
7. Luffy, Monkey 27 100 Masters
8. Law, Trafalgar 30 110 Doctorate
9. Robin, Nico 90 330 Senior
10. Bones, Brook 90 250 Senior
11. Roanoa, Zoro 7y2 250 Junior
12. Nara, Shikamaru 72 25t0 Junior

This data set allows for a variety of the program functions to be tested. The first 10 entries will be successfully created Student objects, while the last 2 include data set errors (Number format) that will prevent those students from being created and added to the students array. This will also cause the Number Format Exception to be thrown i.e. “Invalid numeric format for credit hours or quality points for Zoro Roanoa.” Entry 8 tests that even with the appropriate GPA for the Honor Roll, a doctorate student will not be added to the Honor Roll. Similarly, entry 2 will not be added to the Honor Roll because they are a Sophomore. Enrties 3, 5, 7, and 9 meet the requirements for Honor Roll and will be displayed with the threshold for making the Honor Roll.

**Test:**

A screenshot of a computer

Description automatically generated

As far as learning new information from this project, I would say that it was more sharpening existing skills and knowledge than learning and applying new skills. I have a fair amount of programming experience and have a firm understanding of the current material. Catching exceptions using try-catch blocks, class inheritance, and file reading are all skills that I had prior to this assignment but still got sharpened nonetheless.