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Software Development 1

Project 2 Milestone

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**Abstract:**

This paper is about the Java application I am discussing, which is an application that I am developing that can help automate the Marist housing process. I will also explain certain aspects of my code, and it's functionality.

**Introduction:**

For my second project, I wanted to create an application that could hypothetically be used by Marist. When thinking of things that could be changed at Marist, I felt like the priority point system was a sort of unknown feature. There isn't an algorithm implemented that allows a student to check how many priority points you have, or what type of housing you may get. Even though we get a number towards the end of the year by housing, it is beneficial for many students to know how many points they have so they can stay motivated. Additionally, knowing how many priority points can get you into certain housing can eliminate a lot of guess work in the group. When looking at how one obtains priority points, it is based off of a variety of criteria. Some of the factors are the amount of clubs you're involved in, whether you're in a sport, have a good standing room, didn't get into any trouble, etc. The app I'm creating will help keep track of the criteria required to calculate your personal priority point total. In the sections below, I will include a more detailed system description, a UML diagram of my classes, a literature survey, and a user manual for my program. After that, you will see my conclusion, and any references I have included.

## **Detailed System Description and Requirements:**

As of the milestone deadline, my application consists of four classes. The first class I will explain is my main class. In this class, I declare the integers that I am counting to obtain the amount of priority points. After that, I show a series of print statements for an introduction to my program, providing instructions for inputting your GPA using a Scanner. After the GPA is inputted by the user, the answer class is called, so it can be translated to the amount of priority points. Next, the user is asked to enter an integer for the number of clubs they have participated in using the Scanner. Then the class Clubs is called and the input is stored. An if statement is used to add a count to the priority points depending on the user's input. This if statement is repeated, but the user inputs different information, such as their involvement in those clubs, whether they were in a sport, an intramural, good social standing, etc. The result of priority points is then shown to the user. The next category of questions that the user is asked is whether they are a Sophomore, Junior, or Senior. This calls the class HousingChoices, which is a series of if statements that print the housing choices depending on the user's grade. After, the user is asked if they want to calculate the average for their housing group. If the user inputs yes, the String AvgAverage allows the user to input each member's priority points, and it will print the average. Lastly, a print statement will thank the user for using the app.

Below I will show the UML Diagram:

<b>Main</b>
+ clubPoints : int
+ sportsPoints: int
+ historyPoints: int
+ clubPoints : int
+ roomPoints: int
+ servicePoints: int
+ intramuralPoints: int
+ GPA (): double
+ clubs () : double
+ answer() : String
+ posAnswer() : String
+ sportsAnswer(): String
+ Sports(): Double
+ intSportsAnswer(): String
+ intSports(): Double
+ historyAnswer(): String
+ roomAnswer(): String
+ serviceAnswer(): String
+ hours() : double
+ HousingChoices(): double
+ ClassAnswer() : String
+ AvgAverage(): double
+ AvgAnswer(): String

<b>Housing Choices</b>
ClassAnswer() : String

<b>PriorityPoints</b>
+ priorityPoints : int
Gpa() : double

<b>Clubs</b>
Clubs() : Double

## **Literature Survey and User Manual:**

Because this application is solving a very unique purpose, there is a small chance that there are other projects for priority points. However, colleges with a similar system could have an application similar to this, but with different inputs/outputs. The instructions are easy; download all the java classes and run the main program. To interact with the program, use the command line interface.

## **Conclusion:**

In conclusion, this program can seek a lot of benefit to those who want a simple way to calculate their priority points.