Executive Overview

This report details the initial problems of the class registration procedures, the process by which the group creates a program to solve those problems, and a description and final analysis of the program after it is done. This projects was assigned by Dr. Moldanado on January 21, 2015. All information in this report was created by Group 1, which includes Richard Brookman, Tayven Bigelow, Adam Hill, and Bryan Bengoechea.

**Description**

Metro State University school of Business has had concerns that students are not using the advising office to help them in their academic pursuits. One of the problems they have addressed is the lack of an adequate advising on the path that prospective students must take to satisfy the course requirements for each of their majors. A survey was emailed to all business students via email as to the benefit of having such a program that would outlay a course for the students to follow. Of the over ten thousand emails sent out, 75% of the respondents favored a program that allowed them to map out the class requirements for their major based on previous classes taken. The advising center was also in agreement that having such a program would benefit the students and the staff. Therefore, a request was made of Dr. Moldanado to develop a program that allowed an advising staff member to meet with a student and display a class path for the student for a future two semesters. This project was then tasked to the group via Dr. Moldanado.

**Analysis**

The first step of the group was to develop a problem analysis matrix to brainstorm all the problems that may occur during the creation of the program. The second step was to create a use-case scenario on how the users will interact with the program. Then several diagrams will be created to provide a blueprint of how the project will be programmed, how it will interact with all outside influences, and all the requirements that will be needed.

The problem analysis matrix details the problems associated with the project. Referring to the Appendix, the problems in the matrix include the storage and recall of all the data for each of the students in the school of business. This is caused by the lack of a database for the express purpose of holding student information with the requirements and pre-reqs of all classes in the school of business. There is a problem of the database connection to the school's database. This will cause the information for the student's classes that they have taken to be inadequate or false unless another avenue is explored. A third problem may be the major structure itself, and if that structure is concrete, or may have to be tailored to accommodate changes. These and other problems pose some difficulties that must be overcome to develop the program satisfactorily.

**Development**

The development phase will include the creation of the database that will house the student's information. This database will be developed using ERD diagrams to show the relationships between the student, their classes they've taken, the class requirements for the corresponding major, and the pre-requisites for those classes. Use-case models will be used to show the interactions between the user of the program and how the program responds. A data flow diagram, a functional decomposition diagram, and a program design of primitive processes will be used to determine the processing requirements of the project. The problem analysis matrix ( included in the Appendix ) will detail the problems that are present, their causes and effects, the system objective and constraints, and the proposed solutions for each problem

**Recommendations and Conclusions**

At this point in the process, a working model of the program, the database, and the interactions between them should be created to give an adequate representation of how this model works before applying it on a full scale to the school of business' student database. This will allow the evaluating of potential problems that may occur during the creation and implementation without affecting the existing database for the school. Once the model is out of its testing phase and can operate without any problems, then it shall be integrated into the system. At this time, the advising office will use the program and provide feedback to Dr. Moldanado for any proposed changes to the system.