Use Cases

Western Michigan University Cohort Schedule

CS 4900 - Dr. Kapenga

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This document outlines all possible use cases for the WMU Cohort scheduler program. A use case can be thought of as a collection of possible scenarios related to a particular goal.

1. Definitions

**Cohort** - a collection of 18 to 24 students defined by academic advisors. These students are typically incoming freshmen of the same major. The goal is to schedule all students in each cohort in the same classes so that they can learn and study together.

**Schedule** - the term schedule typically refers to one of 2 things depending on context:

1. A set of classes which do not conflict in time for a given cohort
2. Sets of classes for all cohorts which do not conflict in time for each cohort and capacity for each class

**Advisor** - advisor refers to academic advisors, the people who will be using this software. They currently create schedules for cohorts by hand, spending months coming up with the final product.

**Actor -** Any "object" or person that has behavior associated with it.

**Primary Use Case -** use cases that are most likely to occur when the desired outcome is reached.

**Edge Use Case -** use cases that are undesirable, and less likely to occur

**Basic Flow -** The steps the user will take in order to use the application

**Alternative Flow -** Occurrences that could go against the basic flow that should be taken in to account during development

1. Actors
2. Advisors will be the primary users of the program.
3. The web application will be used by the advisors to interact with the program and create schedules.
4. Primary Use Cases:

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| Use Case Number | 1 |
| Application | Web Application |
| Use Case Name | Advisor using web application |
| Goal in context | This case describes the scenario in which an advisor successfully uses the web application to create schedules for their cohorts. |
| Primary Actor | Advisor |
| Precondition | The advisor must have the proper documentation (cohort list and class requirements, list of available classes) |
| Trigger | The need to create a schedule for the upcoming semester |
| Basic Flow (Scenario) | The advisor logs in to their account, uploads the .csv files containing the cohorts, their required classes, and a list of the classes available for that semester. The scheduling algorithm then creates a list of possible schedules for the advisor to choose. The advisor selects the deschedules for their cohorts that meet them most requirements, and the program emails the results to them, and the other advisors. |
| Alternate Flows  (Exceptions) | * As the algorithm is determining possible schedules, the advisor’s computer loses connection to the internet. * When the advisor attempts to log in, they realize they forgot their password * After the schedules are produced and selected, the email containing their information is not received. |
| Frequency of Use | 1-2 times per semester |
| Secondary Actors | Senior design development team |