S.A.D.

Scheduling Assistant Designer

French Press CPSC 101 Final Project Design

Professor David Casperson

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Rodrigo Nicoletti

Kier Lindsay

JiangTao D Qiu

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**Nouns and Descriptions**

**GUI**

GUI manages all the graphics components of the program. It is responsible for listening for user input and handling the events.

Attributes:   
-none

Behaviors:   
-Load file  
-Filter search options  
-Display course information and time table based on the selected courses.

**Course**

The Course class is designed to store data.  The Constructor takes in the data for the courses and create the needed Date, Time and Location objects.  Course’s will interact with the Schedule, outputting the course information in a convenient way whether it will be used for making a schedule or for displaying information to the graphical interface.  The Course Class will also be able to compare courses and return conflicts.

Attributes:  
-Course ID  
-Component ID  
-Start Date  
-End Date  
-Day  
-Time  
-Duration  
-List of days and start times  
-Location  
-Professor surname  
-Subject name  
-Level of the course

Behaviors:  
-check courses for conflicts, compare two courses

**Date**

The date class is responsible for storing the day, month, year, and day of the week in which the course will happen. It will have methods to compare date objects and the date class is immutable.

Attributes:  
-Day  
-Month  
-Year

**CourseDate**

Data storage class for the start and end dates of a course.

Attributes:  
-Start date  
-End date

Behaviors:  
-Check if a course date is the same as the other.

**Location**

The location class is responsible for storing the building and room number of a course. It will have methods to compare time. Other classes will be able to access its attributes values using its getters and setters.

Attributes:  
-Building Name  
-Room Number

Behavior:  
-checks if the locations are the same

**CourseManager**

The course manager is used by the GUI to prepare the output for making the time table. It also helps the GUI class by turning Course objects into Strings and vice-versa.

Attributes:   
-none

Behaviors:   
-Turns courses into strings and strings into courses

**DataReader**

The DataReader class is responsible for creating an array list of course objects based on the .csv file supplied by the user.

Attributes:  
-array list of courses

Behaviors:   
-turns csv file contents into course objects

**TimeTable**

The Schedule class is a class meant to interact with both classes and the graphical interface. It will take in a list of classes selected through the graphical interface by the user. After obtaining a list of classes it will be able to check for any conflicts and output information in a format ready to be displayed by the graphical interface.

Attributes:  
-course draw information  
-conflicts strings based on the time table

Behaviors:  
-checks for conflicts  
-prepares course draw information

**TimeTablePanel**

TimeTablePanel is the paint component for the Time Table. It draws the time table and all the courses that were added to it using information contained in a TimeTable as courseDrawInfo objects.

Attributes:  
 -none

Behaviors:  
-draw the time table

**CourseDrawInfo**

CourseDrawInfo is a data storage class for the TimeTable that stores the information required by the TimeTablePanel to draw the time table and the course objects.

Attributes:   
-Color  
-Number of days  
-Day  
-Start time  
-Duration  
-Display string.

Behaviors:  
-none

**Division of Work**

**Design:**

All group members contributed equally to the design process and attended all the group meetings.

**Implementation:**

All group members contributed to all the classes and attended all the group meetings.