Requirements Analysis:

PirateScheduler is a program that simplifies scheduling events and courses for a college semester. A user should be able to name the schedule, select courses, manually create events and add the courses and events to the schedule. When the student is done, the schedule should be saved to a file.

When the program is run, the user should be prompted for a file containing a valid list of courses. If the file is not found, a popup box should be presented with the error. The files should contain a course per line. Each line is comma separated and contains the course name, course title, section number, the number of credit hours, instructor’s unity id, meeting days, start time, and end time. Only valid courses are uploaded to the UI, invalid courses should be skipped. If the meeting days are listed as ‘A’ for arranged, then there should be no value for meeting days. Otherwise meeting days can be ‘M’, ‘T’, ‘W’, ‘H’, ‘F’. No other values should be null. The course name should not be fewer than 1 or greater than 6 characters. The section number should be exactly 3 characters. The credit hours must be greater than 1 and less than 5. The start and end time must be valid military time and the start time must be less than the end time.

The user should be able to name their schedule, add a course to the schedule, remove a course from their schedule, add an event to their schedule, remove an event from their schedule, display their final schedule and reset their schedule. When a course is selected, the course information should be displayed on the screen. As the user adds courses and events to their schedule, they should not be able to add conflicting events and courses. If the user names the title incorrectly, a pop-up box should be displayed indicating the title is incorrect and the user should be returned to the UI with no change to the schedule.

The final schedule should be populated as a text table containing columns for the course name, section, title, instructor, credit hours, meeting information, weekly repeat, and description. If the file cannot be saved, a popup box should be displayed to show the error.

PirateScheduler should simplify the planning process for generating a schedule. It inputs all the course offering and course information in one place so that each course can be viewed and compared together. The program notifies the user if they have conflicts in the schedule if they have events or courses that overlap in meeting times. It also notifies the user if they have already enrolled in courses or scheduled events with the same name. This is extremely helpful in reducing human error by overlapping obligations. The event functionality allows the user to create events adjacent to courses that expands the usability of the program. These factors contribute to it saving time and making it more convenient to create a schedule.

Domain Partitioning:

Components:

User Interface

Course\Event

File Input

File Output

Scheduler