Software Documentation for

< Course Registration Schedule Helper>

CS114 Introduction to Software Engineering

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# Revision History

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Responsible Person** | **Version** |
| Web scraping started | 3/2/22 | Needed to begin the process of data acquisition | Joe | 1 |
| Course section logic | 3/6/22 | In order to find compatibility between courses | Jade | 2 |
| Schedule logic part 1 | 3/15 | To determine possible 5 course schedules | Paige | 3 |
| UI | 4/2 | To create graphical user interface | Paige | 4 |
| Schedule logic part 2 | 4/12 | To eliminate duplicate in schedules and display them to the user | Jade | 5 |

# 1 Introduction

## 1.1 Project Scope and Purpose

The purpose of our application is to provide assistance in regard to course scheduling and make the registration process simpler by showing schedule options to students.

## 1.2 Intended Audience

The intended audience is mainly SNHU students who need to register for classes. This project purpose the project will solve this audience is aiding the student in choosing the best schedule for them.

# 2 Description

## 2.1 Product Description

The project will help make the course registration process easier for students. The main function is to provide possible schedule options, given the days and times of course sections available. The program outputs different schedule options based on the classes searched by the user. The point is to give the user multiple option for their schedule so they can find the best fit.

## 2.2 Operating Environment

Target platform is Windows executable; development environment will be C# WinForms.

## 2.3 User Classes

<give a list of classes that you will be designing with methods and attributes. At this point the list does not have to be exhaustive. This is to prompt you to think about your project. It will change as you are coding.>

### 2.3.1 Class 1

Logic.cs and LogicPR.cs:

These classes both contain the logic which determines if classes are compatible with each other and removes repeat classes from the list.

### 

### 2.3.2 Class 2

Schedule.cs:

This class puts together the list of compatible classes and there day and time they happen to form a schedule option.

### 2.3.3 Class 3

SNHUCourse.cs:

This class is part of the web scraping that helps gather the data and output it into a format we can use.

# 3 Features

## 3.1 Feature 1

The first feature is a separate page that displays a drop-down box containing all the subjects of classes SNHU offers. Here the user selects which subject of class they would like to search for and from this the program goes and collects all the data from this subject and stores it.

## 3.2 Feature 2

The second feature will be a student can input classes within the subject they need to take for the next semester and the program will search the system for the data regarding the classes. The purpose of this is so students can search which classes they need to take for the next semester.

## 3.3 Feature 3

The third feature will be once the program find the classes in the data the classes will be configure by day and time and give the students multiple options of schedules to choose from. The purpose of this is for students to be able to choose the schedule that works best for them.

# 4 Interface

## 4.1 User Interface

The users will interact with the software using graphical UI.

## 4.2 Hardware Interface

The hardware that will be needed is fkr hardware such as a PC with minimal ram and cpu needed.

## 4.3 Software Interface

The software that will be used is Windows OS.

# 5 User Document – How To

The software is fairly simple the title page pops up and the user goes to a top tab and opens options and selects gather course data. From there the user selects a subject of classes they want from the drop down and when they hit confirm it will have them log into there snhu account. Once they are logged in, the login page will go away, and the user can go back to the main title page and input the classes they would like to search. Once the user selects the find schedule button a new page will open that contains multiple different schedule options.

# 6 Conclusions and Lessons Learned

We have learned a lot about data acquisition and how to gather and store data from a different website. We also learned a significant amount about the UI graphics that visual studios have to offer. This project taught us a lot about group communication at the beginning of the project our communication was very rough, then we started communicating on discord which helped immensely. The communication was especially important while using git, so we could combine our work without issues.

At the beginning of this project, we had a lot of ideas about features we wanted to add. We knew we wouldn’t be able to finish them all, so we prioritized the most important thing, which was creating schedules. This taught us how to scale back our project without sacrificing our main goal. We also coded the project in a way that would allow us to add these features in the future and expand the application. Our group realized that our project could have been improved but with the time restraint we really had to prioritize our main focus. While we know that our project could be improved, we achieved our main goal of helping people create schedule options.