Project Proposal - CSCI 331:
Object Oriented Software Development – Spring 2025

Name of Project	Disgusting Soup
Team Name	<team name="”<team name=”Disgusting Chefs”/>” />
Team Members	Emails
Connor McDermid	mcdermidc@stumail.viu.ca
Liam Khoo	Liamkhoo4@gmail.com
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Luka Karanovic	lkaranovic88@gmail.com
Team Member 5	<email=”Replace with Email 5”/> <- our favourite team member

Project Description
Please describe exactly what you are planning to build. Make sure to include the following: ● Start with the need or problem you are trying to solve with this project. ● Describe why your solution is going to adequately solve this problem. ● This section should have 2 paragraphs.
Scheduling, especially at a university where everyone has a different but equally important schedule can be a difficult and daunting task – especially when the tools provided by the university for scheduling are as unwieldy, outdated, and generally inadequate as PDF schedule documents. For people scheduling get-togethers, club meetings, organisation meetings, and generally events for the student body, trying to figure out when people are in class is sometimes impossible. We want to develop a tool that will make this process simple. Enter **Disgusting Soup**. This easy-to-use utility will scrape the VIU-provided scheduling site and produce a timetable for availability. Disgusting Soup will be simple to use from the command line or, as a stretch goal, from a UI. Disgusting Soup will be usable programmatically by script and manually by a user. It will scan the VIU course timetable webpage (disgusting) and generate a list of time blocks (every 30 min interval) with a list of all the classes in session during each block. Our goal is to be able to sort the timetables by faculty (for faculty specific events), and to have a basic algorithm that suggests optimal times.

Value
Please describe in more detail why your project is valuable. Answer the following questions: ● What are the benefits to getting this right? ● What are the risks if you don't get it right? ● What are the risks that will make executing this project difficult? ● This section should have 3 paragraphs.
The benefits to getting this right is that event organizers and club leaders can organize events and meetings when students are not busy (in class) while likely still being on campus (by choosing times close to when lots of classes are), leading to high event attendance and an increase in club participation. If we don’t get this right, event organizers and club leaders will deal with the same scheduling problems as they have dealt with before. They may even have even worse scheduling problems if our generated timetables are inaccurate and display a time where everyone is busy as ‘free’, causing them to plan events when no one is actually available, despite being told by our system that it’s a good time. The main development roadblock for this project is the time constraint we have. As many of us are busy with other courses, there is a good chance we don’t complete the project within the allotted time.

Additional roadblocks include not being able to get the needed info to computer our timetable, VIU timetable updates causing our parsing method to not work anymore, Beautiful Soup and XML parsers not allowing us to do what we want to do, and the development of an algorithm that will find ideal time slots.

Deliverables

Please describe in detail what your final deliverable for this project will be. Include a specification of the project and what functionality the software will deliver when it is finished.

- This section should have 3 paragraphs.

Our deliverable will be a software package that includes our program and its necessary dependencies, as well as an accompanying manual page. This manual page will include instructions of how to install, set up, and use Disgusting Soup both through the graphical elements and also via the command line and in scripts.

Our program will require network connectivity and will work only for VIU schedules. It will be executable on the command line and should produce a list of user-specified length of the most optimal meeting times as its output.

It will also have an interactive mode that will allow the user to interact with the produced timetable and manually select times, with a UI displaying a heatmap or timetable of all times allowing the user to see what is the most optimal.

Development Roadmap

Please break up your development cycles into a clear set of milestones. This section needs to be very detailed (will vary depending on the scope of the project but aim for 1 page for this section).

For each milestone, please describe:

- The software functionality that we can expect after the completion of each milestone. This should be detailed enough that it can be used to ensure that the software meets the specification you outlined in the Deliverables section.
- Which group members will be working on each milestone and their roles.
- The amount of work (in terms of hours) required for each milestone.
- When each milestone will be completed (using real dates)

Milestone: Mise en place

Functionality (5 sentences):
To prepare our disgusting soup, we will be laying the foundation for the rest of our program's functionality. We will start with the ability to read timetable XML data from VIU's timetable website. Once we are able to fetch this information, we must implement some functionality to store this information in the program to be processed. This includes sorting the data and making sure it is in a usable format. This will allow for future functionality to be more easily implemented.

Members responsible and their roles: Everyone will be doing everything.
Work hours needed: 10
Completion date: Feb. 23, 2025

Milestone: Cooking the soup

Functionality (5 sentences): To cook our disgusting soup, we will be developing the majority of the backend functionality of our project. This includes taking our user input, gathering and sorting data (our soup ingredients) and developing a timetable list that takes every 30 minute block of the day and

puts all of the courses going on during that time. We will then have an algorithm that looks for time blocks with a low amount of courses that are next to time blocks with a lot of courses (as people will likely be on campus then). This will avoid the best times always being at 2 a.m. The output goal is to cook a soup that presents a complete timetable list and the top 5 times for that query.

Members responsible and their roles: Everyone will be doing everything.
Work hours needed: 15
Completion date: March 16, 2025

Milestone: Serving the soup
Functionality (5 sentences): Developing an appealing and easy-to-understand user interface will be an important step to let people of different knowledge and experience use the Disgusting Soup software. Serving the soup will require the following steps from a user:

- A user will be asked to provide details of the meeting like duration, for example.
- Then Disgusting Soup will run the algorithm to determine the best meeting time(s).
- Once done, the program will display the best time(s) to the user.

Members responsible and their roles: Everyone will be doing everything.
Work hours needed: 30
Completion date: April 1st, 2025

Milestone: Eating the soup
Functionality (5 sentences): There are some goals we have that have been omitted because we don't know if we'll have the time to get them done. These are our "stretch goals." If we've completed all other milestones and we still have time, we'll work on mixing these features into our Disgusting Soup. There's no guarantee we get to them, and there's no guarantee they'll work at the end of the project, but the Soup's overall functionality won't be compromised by their absence. They are strictly optional.

Members responsible and their roles: Everyone Everywhere All At Once
Work hours needed: Any amount of time we have left after completing the last milestone.
Completion date: April 9th, 2025

Estimated Total Work

Add the total estimated hours across all the milestones and include that number below.

Total Estimated Hours: 55

Maintenance and Upgrade Plans

Specify your team's long-term plans to maintain this software and upgrade it over time.

- This section should have 2 paragraphs.

We plan to upgrade the system over time to provide new features to our users. To make it easier for users to understand the output of our product, we would like to implement a visual heatmap to graphically indicate to the user the best time to schedule their event. In order to help users find the most optimized time possible, we would like to eventually provide an option to choose the size of the time blocks the system will consider when calculating the schedule. It is common for students to take classes from multiple faculties at once, so it would be beneficial for our program to consider this by being able to build classes from several faculties into one timetable.

Other plans for maintenance involve bug fixes and changes to our program that may be required if the infrastructure our program relies on is changed. For example, if the VIU timetable site is updated, or the format is changed, it may break compatibility with our program. In order for our product to have a long lifespan, this must be monitored over time.

Relevant Experience
Please describe (using words) your team's relevant experience, and why you think you are the right team to build this project. You can cite your team's prior experience in other projects, doing similar dev work, individual team members' backgrounds, etc. ● This section should have 3 paragraphs (one for each team member).
Artem: I think we are the right team to build the Disgusting Soup project because each of us is interested in it and has unique skills that could be helpful to build it. For instance, I have taken a 265 course before, which taught me how to work in a team, solve potential conflicts (if any), and collaborate on a daily basis. Although I have very little experience in python, I'm eager to learn and want to succeed, which will help me to adapt to and contribute meaningfully to the project. Liam: I believe we are the correct team to cook Disgusting Soup because of our previous team project experience, excitement for the project, and the high level of competency of our team members. Personally, I have previous experience working in a team for CSCI 265 and also am currently working in a team for CSCI 375. Despite currently being inexperienced with python, my core programming concepts and skills are fairly solid which should allow me to contribute to a successful project implementation. Luka: I think we are the right team to cook the Disgusting Soup because we all know each other from past courses having taken the program since first year together, meaning we get along well and aren't afraid to communicate ideas between each other. We also all have skills that complement each other very well. I'm good at project organization, documentation, and planning. Artem is very good at UI development and idea generating, Connor is an extremely skilled programmer, and Liam is a good programmer and excellent communicator. I know that myself and the rest of the team have had great success on their projects in CSCI 265, and a few of us have done additional dev work outside of school. Connor: I think we are the right team to cook the Disgusting Soup because we have previous experience working together on projects like this, meaning we've learned to communicate effectively with one another, even when communicating complex ideas. Personally, I think I'll be a valuable team member thanks to my previous Python experience and my previous experience and work with networking and RESTful APIs in Python from working with projects outside of school with other dev teams. My team members are all excellent programmers and thinkers, and with them I'm confident we will complete our project.

Additional Information
Please include any additional information that you think would be useful to help evaluate your proposal.
None of us are specialists in making soup so expect it to taste really bad. (I can't even make toast) I occasionally try making sandwiches and they're so trash, I don't know how other people do it – Connor