CSc 372 Project
Spring 2025

Released: Before Monday March 17th
Part 1 Due date: SA6 Monday March 31st 2025 by 11:59 PM, group private GitHub repositories provided soon after
Final Due date: Friday May 2nd 2025 by 11:59 PM

Project Overview.
In this project, you have the opportunity to learn a new programming language. You will be placed into groups of size 3 or 4 people.

Part 1.
SA#6 Group Members and Language Preferences (10 points)
Provide your group member preferences and language preferences in the google survey at https://forms.gle/ddgxdyfNXn2pMfu57. You should indicate languages that are new to everyone in your preferred group and that are not covered in this class. I will also limit language choice so that we get a good variety, so no more than 3 groups will be allowed to work on the same language. See the FinalProject directory in https://github.com/UofA-CSc-372-Spring-2025/CSc372Spring2025-CourseMaterials/tree/main to see the code that will set up an optimization problem with the information you are providing to maximize the happiness in the class.

Part 2. The Main Project (180 points)
This is the main part of the project and is all due by the deadline noted above. **Late submissions will not be accepted.**

There are no other intermediate deadlines, but it is in your best interest to start early (and finish early if possible – see below!)

The requirements for the project are:
Learn the language at at least a medium-level of proficiency to complete and produce the following:

- A substantial program (200+ lines) that
    - is complex enough that each member spends approximately 10 hours on it
    - showcases what is special about the language
    - is well-documented with
        - sufficient explanatory comments
        - a clear overview of what each major piece of the code does
        - instructions on how to run the code
    - is thorough – this includes the code as well as sufficient tests to show that the code works
    - illustrates proficiency with the language (at a medium level)
- a video presentation that

- does not exceed 20 minutes – seriously, we're going to deduct 1 point for every full minute over 20 minutes
- includes
    - everyone in the team for at least 5 minutes
    - why you picked the language and the program/application you wrote in it
    - a brief tutorial of the language (just cover some of the basics you used to implement your program/application)
    - a brief overview of the language including –
        - history
        - how it's used
        - overall paradigms and features (use the terminology we covered in class)
        - a comparison of this language with other languages you've used
        - an overview of your program that
            - shows that you understand your code and the language
            - highlights some interesting features of the language and of your program
            - provides evidence that it works (i.e. you should run the code)

Part 3. Final Work Distribution and Reflection (20 points)
Important Note: This part should be submitted individually. You will not get credit unless you submit your own work for this, and it will be submitted on Gradescope.

The requirement here is for you to submit a short (no more than 1 page!) summary of the work distribution among the team members. This report COULD affect people's grades, so be honest. You should also provide a brief reflection on your experience working with the group, including any challenges you faced and how you solved them.

IMPORTANT NOTE
Everyone in the group needs to be involved in every part of this project. The final work distribution reports can reveal if there were any issues with the efforts of each person, but please be aware that if there are serious issues in the group that require intervention (or deductions in final grades), it is usually best if I know about them early on. So the overall guidelines for handling issues in the group are:

→ Try to handle issues as they come up with communication and negotiation.

→ If problems persist, come talk to me about them. I can (and have) split groups up and/or provide means for the contributing members to be graded separately from the non-contributing members. But I need to know about the issues early on, and I need to know what you've already tried to solve the problem.

Submission Procedure
Part 1 – Fill out the google form as directed.

Part 2 – Submit a single zipped folder under the Project Assignment on D2L. (This will only be set up after I get all the groups. Only one submission per group is necessary).
Part 3 – Submit individually on Gradescope.

Grading.

Part	**Points**	**General Criteria**
Part 1 Group Members and Language Choice **Survey**	10	completed correctly by the deadline
Part 2 Final Project: Program	100	● complexity ● accuracy ● style/documentation ● testing ● creativity ● completeness
Part 2 Final Project: Video Presentation	80	● complete ● well-organized & clear ● style/accuracy (try to avoid too many typos, etc.) ● timing (don't go over 20 minutes)
Part 3 Final Work Distribution and Reflection	20	● complete ● length (don't go over 1 page)

Extra Credit.
There are two ways you can earn some extra credit on this project.

(1) Produce an amazing project that goes above and beyond the basic requirements. (up to 10 points)
(2) Turn the project in early. The grading takes so long on these that it could help if you submit it early, so you can get 2 extra credit points for every early day (up to 14 points total). If you do turn it in early, you need to let me know (by email) that you've submitted and it's ready to be graded. Without the email, we won't know it's ready, which will defeat the whole purpose, so no email → no extra credit.