

Assignments for ITM 424

1. Overview

Students will have two project assignments and three HW assignments.

2. Project Assignments

Description

This is a team project. Basically, each team consists of two or three students.

We have two topics and have the presentation for each topic. For each topic, teams are formatted randomly by the e-class system.

Present your results. Each presentation should be done within 5 minutes

Grading

The total scores assigned for the projects are 20 points. That is, each project has 10 points.

Basically, the evaluations are conducted by the teams. However, individual contributions on each team could be considered as well.

Evaluation criteria

Refer to the check list for each project. According to each point in the check list, the score will be quantitatively measured

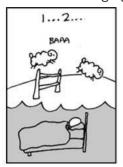
Feedback strategy

The feedbacks will be provided through e-class system

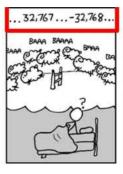


➤ 1st Project

• Refer to the following figure.









Source: xkcd.com/571

Guideline

- Use C or C++ programming languages
- Make the largest floating number as you can represent with built-in data types (i.e., the default data types provided in the language, here, consider float).
- Design the data structure how to represent the number that exceeds the maximum range supported by the built-in type
- Show the results of applying the arithmetic operations (+, -, X, /) to those numbers
- The evaluation will be done by the following check list by the presentation and the results will be verified after the presentation using the submitted source code.
- In the presentation, you need to clearly separate which one is done and is not done to get partial points for the done parts; otherwise, you will not at all.
- Check list (source codes must include these items; they and their results are needed to be explained in the presentation; the score portion for each item will be varied according to the relative difficulty)
 - Print the largest floating number that can be represented by the built-in data type
 - W Use the float data type
 - How the following number, which exceeds the maximum range by the built-in data type,
 is stored in the data structure in the program and is actually printed
 - X Use the following number: 12341234123412341234.1234.1234
 - X Show the following steps: 1) open the code, 2) compile the code, 3) run the executable. Unless these steps are presented, the scores will not be given even if the source code is correct
 - Each arithmetic operation works well (+, -, X, /). If some of them are implemented, then you need to clearly explain them to get partial points.

 - X Show the following steps: 1) open the code, 2) compile the code, 3) run the executable.
 - The operations work for any other random numbers; show the results in the presentation



- Be aware of cheating! The cheating will be detected based on the submitted source codes.
- Presentation and submission
 - Presentation: 31 Oct. 2022 at 11:00 AM @ Frontier 511
 - Submit the presentation slide and supplementary materials (including source codes)
 before the presentation; the results will be verified by them after the presentation
 - Late submissions are not allowed