UNIVERSITY OF WATERLOO

Practice Submit Midterm Examination
Term: Fall   Year: 2021

Computer Science 343
Concurrent and Parallel Programming
Sections 001, 002

Duration of Exam: 3 hours including download and upload
Number of Exam Pages (including cover sheet): 5
Total number of questions: 3
Total marks available: 15

Click below to view the time remaining in the Practice Midterm
https://student.cs.uwaterloo.ca/~cs343/cgi-bin/practiceTime.cgi

Instructor: Peter Buhr

November 2, 2021

Instructions

The midterm duration is **3 hours** including download of the exam and uploading/submitting the programs. Your time begins at the exam download and is compared with the date-stamps on the files you submit.

The midterm consists of 3 *complete* running programs, which will be tested after the exam.

You are given three files with a compile command, sample test data, and the program main for each question:

        mary.cc
        fred.cc
        jane.cc

Answer each question in the appropriate file using the given program main. Do NOT subdivide a program into separate .h and .cc files.

After writing and testing the 3 programs, submit the three file on the undergraduate environment using the submit command:

        $ submit cs343 midtermP *directory-name*

As a precaution, submit often not just at the end of the midterm.

The following aids are allowed:

- computer to write, compile, and test the midterm programs.
- course notes
- course textbook
- your previous assignments
- µC++ Annotated Reference Manual
- man pages
- cppreference.com / cplusplus.com to look up C++ syntax

The following aids are NOT allowed:

- any answers from prior midterm exams because you did not create them
- any web searching, like stack overflow or Wikipedia
- any interaction with another person
- any use of another person's documents or programs

Basically, you are to complete the midterm by yourself using only course-related material or work you have created versus the work of others.

There is no way for us to fairly answer questions over the 24 hours of the exam, so state any assumptions with a comment in the program and press on.

Do not post on Piazza during the 24-hour exam period. If necessary, do a private post.

Mary Program

1. **5 marks** Write a program to compute a mary ...

   ...

   The program is compiled with the following command:

   ```
   $ u++ -g mary.cc
   ```

Fred Program

2. **5 marks** Write a program to compute a fred ...

   ...

   The program is compiled with the following command:

   ```
   $ u++ -g fred.cc
   ```

Jane Program

3. **5 marks** Write a program to compute a jane

   ...

   The program is compiled with the following command:

   ```
   $ u++ -g -multi jane.cc
   ```