CS 142: Program design & methodology

3/25/26

This course will...

- ...continue to develop your programming skills from CS 141
- ...begin teaching you how to optimize program efficiency/speed
- ...begin covering “higher-level” program organization so you can think about programs in larger units than statements and methods

Materials

- No required textbook (there is an optional reference)
- Google Classroom and course website (http://courses.knox.edu/cs142/)
- A clicker to participate in lecture
- VS Code for programming

Peer Instruction

- Lectures have multiple choice questions
  - You answer, discuss, and then re-answer
  - Discussion is key!

Collaboration

- Allowed:
  - Talking about concepts and problem ideas together as long as you acknowledge them and your submission is your own work
- What isn't allowed?
  - Any collaboration on an exam
  - Copying code from any source (even if variable names or comments are changed)
  - Working together without giving credit

AI Use

- Generative AI does very well on problems for this class
  - But that's not the point: I don't need the solution, you need the practice
- My plan is to add some AI material
  - How to use it for productive programming
- By default, use it to explain if you want, but not to do the problem
  - Include a transcript of your session if you use it

Succeeding in this course

- Come to class and participate
- Complete every assignment
- Come to my office or send me an email if something doesn’t make sense or you are stuck

Note the late policy

- Deadlines actually 8 hours later
- Can submit 2 assignments a day late or 1 assignment later than that (but within 2 weeks)
- Other extensions require extraordinary circumstances, but don’t hesitate to talk to me

Expect HW today

- Codingbat problems for practice
  - share your “done page” with me
- Essay about why you’re taking the class
- Extra credit:
  - Pre-survey to assess your background and learning
  - Questions about parallelism to assess the questions

Which of the following correctly replaces the contents of the array nums with all 0s?

A. for(int i=0; i<10; i++)
   nums[i] = 0;
B. for(int i=0; i<nums.size; i++)
   nums[i] = 0;
C. for(int i=0; i<nums.length(); i++)
   nums[i] = 0;
D. int i = 0;
   while(i < nums.length)
   nums[i] = 0;
E. Not exactly one of the above

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A.
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for(int i=0; i<10; i++)
    nums[i] = 0;
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B.
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for(int i=0; i<nums.size; i++)
    nums[i] = 0;
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C.
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for(int i=0; i<nums.length(); i++)
    nums[i] = 0;
```
D.
```
int i = 0;
while(i < nums.length)
    nums[i] = 0;
```
E. Not exactly one of the above (none are correct)