PIC 10A 2B

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Today...

- HW4 Q&A

- Review for Midterm

- More Questions?

  - HW4, HW5, or Midterm

HW 4 Q&A

- Problem 1: Review the exercise from Week 3: "Prime factorization"
  - In fact this covers the first problem of the HW.
  - Please make it clear in the submission that you referred to my code (if you did)

- Problem 2: Review the exercise from Week 4: "Random_Walk_Simulator"
  - It is a simplified, 1-D version of HW4 P2
  - Now, instead of having 50% chance to go up/down, you need 25% chance to go up/down/left/right
  - In addition to the boundary check, you also need to check if it's back at the origin
  - The rest is more or less the same!

- Let me know if you want me to go over those previous exercises again

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Review for Midterm (1)

- Variables
  - Naming rule

- Numeric Types
  - int, short, long, float, double, etc.
  - You don't need to memorize the exact upper/lower limits for each type

- Arithmetic Operations
  - +, -, *, / and integer division
  - increment/decrement (++/--)
  - Remainder (mod) operator %

- Math Functions
  - <cmath> library
  - cos, sin, pow(base, exponent), sqrt, etc.

- Round-off Errors

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Review for Midterm (2)

- Strings
  - Sequence of "char"s → accessible through [ ] (subscript operator)
  - + works for string + char, string + string (as a concatenation)
  - Difference between cin >> ... and getline(cin, ...)
  - Member functions (e.g. length(), substr(), etc.)

- Output Formatting
  - <iomanip> (**i**nput/**o**utput **manip**ulation)
  - setprecision(), setw(), etc.

- Control Flow
  - if/else, for, while, do while
  - break and continue
  - Nested Loops

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Review for Midterm (2)

- Comparison Operators
  - <, <=, >, >=, ==, !=
  - For strings, the comparison is *lexicographic*, and uses the ASCII code of characters
  - Numbers(0-9) < Capital letters(A-Z) < Lowercase letters(a-z)
- Random Numbers
  - <cstdlib> → rand() and srand()
  - <ctime> → time(nullptr) for setting the seed
  - Formulas
    - r_double = (rand()*1./RAND_MAX)*(B-A) + A;
    - r_int = A + rand()%(B-A+1);
- Functions
  - Pass by Value (Copy) vs Pass by Reference
  - Procedures

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Questions?

- Regarding HW4, HW5, or Midterm?

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Your Feedback is welcome

- Don't hesitate to give a feedback on the discussion
- Use the link on my Github repo, or the link below:
  - https://forms.gle/erZj1iSgHNrHQuXk6

My Github repo on the web looks like:

📁 code	Week2 Tu
📄 LICENSE	Initial commit
📄 README.md	Update README.md

README.md

PIC10A

PIC10A discussion 2B, UCLA for Fall 2022

Google form link for feedbacks: https://forms.gle/erZj1iSgHNrHQuXk6

Click this link

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