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



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



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> (input/output manipulation)
- setprecision(), setw(), etc.

Control Flow

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



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



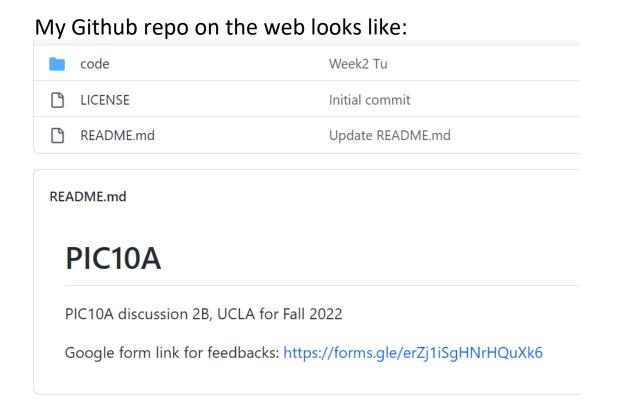
Questions?

• Regarding HW4, HW5, or Midterm?



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



Click this link

