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Overview
For the second week of PLTL, we continued to go over run time functions. If time permits, we will conduct the grid exercise (to see how many rectangles there are in a grid), as an exercise in divide and conquer (modular decomposition). They had a quiz this Wednesday over run time functions.

- Pass out note cards for students to fill out. 5 min
  - Contents: Name, Email, Date, Question they had.
- Ask the students if they had any questions or concerns about upcoming quiz 15 min
  - If the students have concerns, then class addresses them.
- Go over quiz policy (generic stuff about 2402 quizzes).
- Go over run time functions (similar content to quiz). 30 min
  - 2 or 3 problems:
    - easy warmup (two loops depending on n)
    - intermediate (outer: n, inner: i [increment by +=2])
    - hard (outer: n [increment by +=3], inner: i [increment by *=3])

Total Time : 50 min

- If we have time, then we will do the grid exercise. ~15 min
  - A simple 3x3 grid, find out how many rectangles, of any size, are in the grid.
    - Point of the exercise is not to find the correct answer.
    - It's more important to know how to decompose the problem.
  - Also go over importance of several CS concepts (when to use floor/ceiling).
    - This is to help them with their lab assignments.

Example of some runtime functions we might give them:

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ex1:
for(int i = 0 ; i < n ; i++)
  for (int j = 0; j < n; j++)
    sum++;

ex2:
for(int i = 0 ; i < n ; i++)
  for(int j = 0 ; j < i ; j += 2)
    sum++;

ex3:
for(int i = 0 ; i < n ; i += 3)
  for(int j = 1 ; j < i ; j *= 3)
    sum++;
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