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CMSC21 Lecture 13

Github link: https://github.com/R4inMeka/CMSC21/tree/main/Lecture13

Algorithm:

1. **Declare Structure**
   Under the structure, there are two points, midpoint, slope, and distance between 2 points.
2. **Function Declaration**

```
float solveSlope(struct line *line1);
float solveMidpoint(struct line *line1);
float solveDistance(struct line *line1);
void getSlopeInterceptForm(struct line *line1);
```

3. The program starts by getting the two points from the user. It will be stored under the structure for two points.

   After getting the points, the program will proceed to solveSlope func. passing the structure by reference. Using pointers, the function will return to the structure the slope. I also used -> for this. After getting the slope, it will be printed out.

   The program will now proceed to solveMidpoint. The same algorithm for solveSlope func. This time, the points for midpoint in point3 in the structure. I added point3 structure for the midpoint.

   After the midpoint, the program will proceed to solveDistance func. The same algorithm for solveSlope.

   Finally, the program will proceed to getSlopeInterceptForm. The func will use the midpoint and point2 to get the b in the equation y=mx+b. After that, it will be printed out.