

Solve the following problems. If necessary, include code, images, or scanned drawings to support your answer. Submit your solutions as a pdf. Attach Java source files as needed.

Question:	1	2	3	4	5	Total
Points:	100	100	100	100	100	500
Score:						

Week 2 Exercises: Communicating Ideas

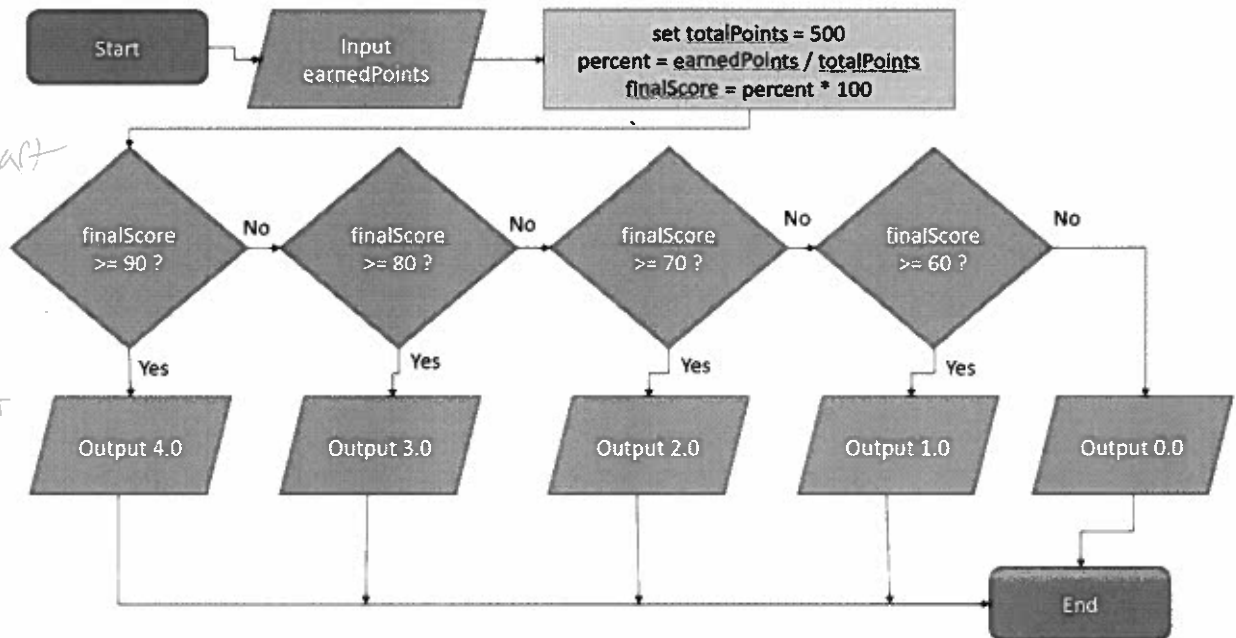
1. (100 points) Write pseudocode describing an algorithm that does the following:

Ask a user to enter the length and width of a room in feet. Calculate the square footage of the room's floor. Determine if the user plans to carpet the floor. If so, calculate the cost with carpet costing \$8.45 per square foot. If not, calculate the cost of hardwood at \$15.64 per square foot. Display the total cost for the flooring project to the user.

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1. ASK user for length and
   define it as L.
2. ASK user for width and
   define it as W.
3. Multiply W and L and define it
   as A.
4. ASK the user if they
   want carpet (yes or no question)
5. If yes, multiply A by 8.45
   and define it as TC.
6. If no, multiply A by 15.64
   and define it as TC.
7. Display TC to the user
  
```

2. (100 points) a. Describe in one to two sentences what this flowchart is doing. Not just the steps, but rather, why are we doing those steps? What is the point of this algorithm?



The flowchart
calculates
gpa based
on the 4 point
scale to
give an
assignment
score

- b. Write pseudocode for this flowchart.

Tip: it's okay to put a decision inside of another decision's path. Just make sure to indent properly and note the "end" when a path finally completes. Let the flowchart be your guide!

ASK user to input earned points and define the value as earned points

Set total points to 500

Define percent as earned points divided by total points

final score = percent * 100

If not Output = 0

If final score ≥ 90

Output = 4

If not then If final score ≥ 80

Output = 3

If not then If ≥ 70

Output = 2

If not then If ≥ 60

Output = 1