1- Given the following code for the so-called Hiring problem:

HIRE-ASSISTANT(n)

```
1   best = 0           // candidate 0 is a least-qualified dummy candidate
2   for i = 1 to n
3       interview candidate i
4       if candidate i is better than candidate best
5           best = i
6           hire candidate i
```

Assume that the cost of interview (line #3) is C_i and the cost of hiring

(line#6) is C_h. If $C_h \gg C_i$, what is the **worst-case** running time of this

code?

2- write a Java code for the right dominant problem in Lecture 1

- Verify your code using the given input: **(10; 9; 5; 13; 2; 7; 1; 8; 4; 6; 3)**

- What is the running time of your code? Show all analysis.

- Can you propose a linear time code? Show all analysis. What is the limitation?