CS1010 Tutorial 1
Group BC1A

27 August 2020

Ground rules

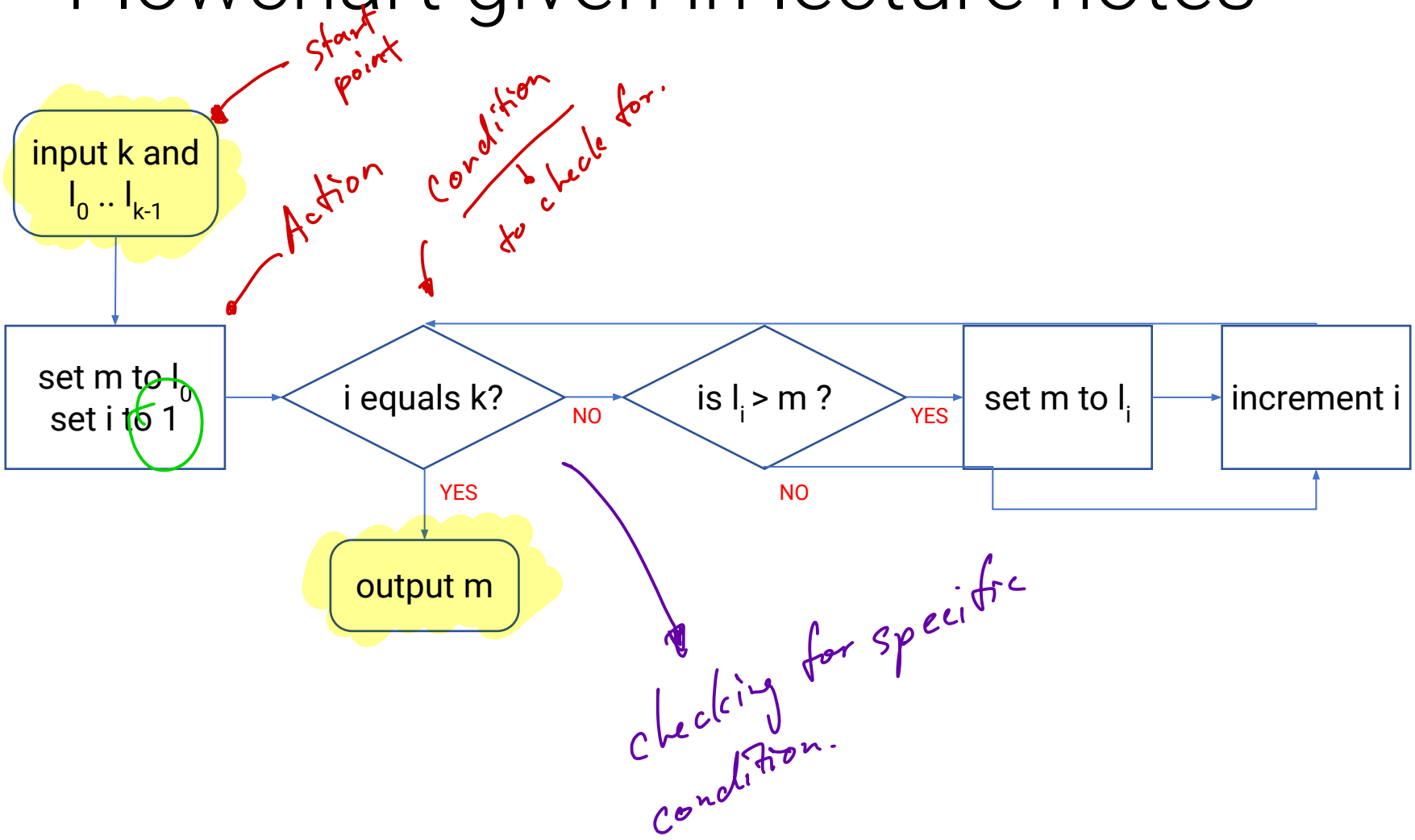
- Be participative in class
  - Turn on your webcam for lesson
  - Answer when questions are being posed
- Help each other out
- Don’t be afraid to ask questions if needed
  - Can either unmute your mic or
  - Private message me

Topics for today

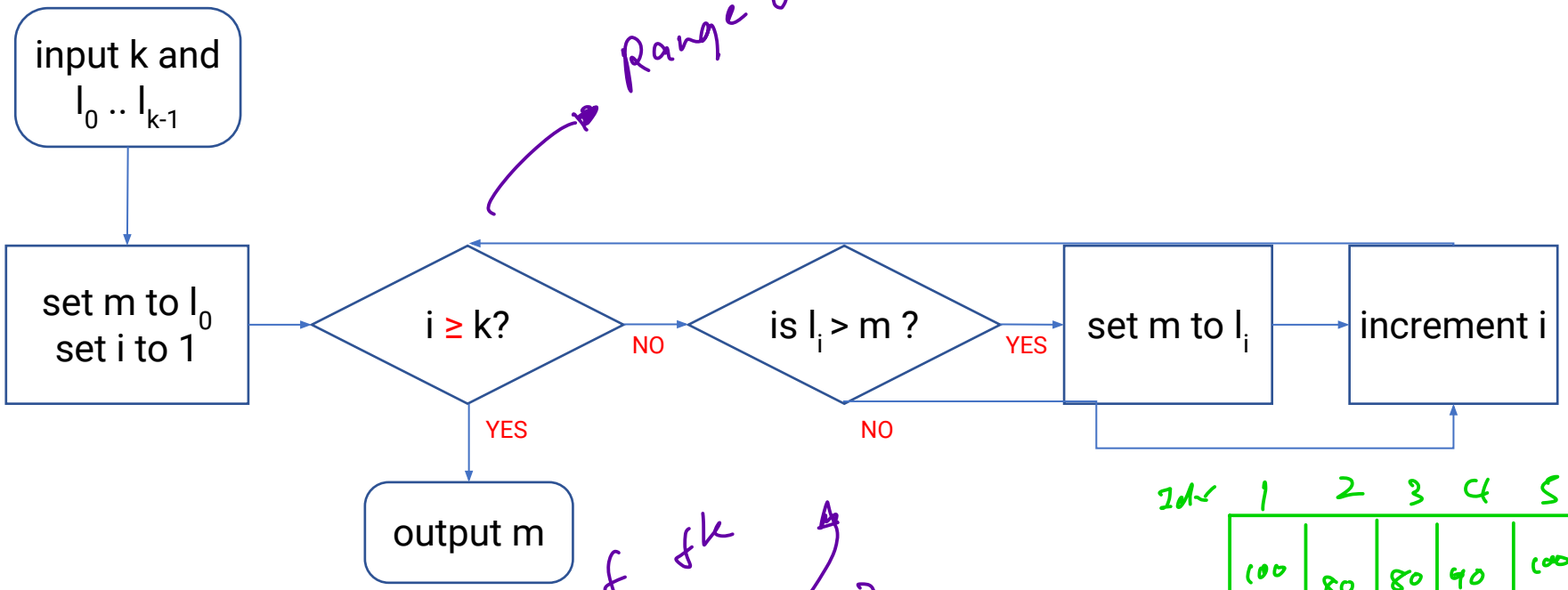
Objectives

- Recap on flowchart
- Going through problem set
- Accessing PE account
- UNIX Walkthrough
- Compiling and Running C programs
- Summary

Flowchart given in lecture notes



Problem 1.1(a)



Range of condition

- multiple occurances of l_k ?

constantly updated

?

Idx 1 2 3 4 5

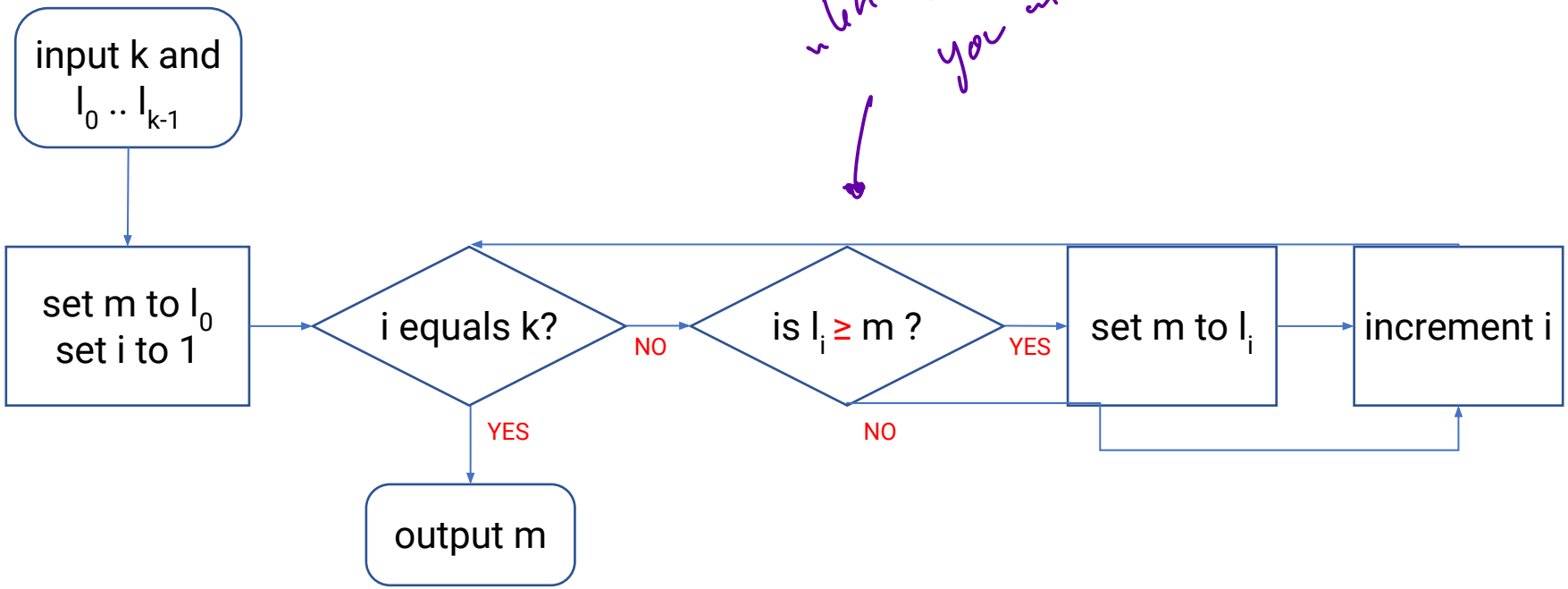
100 | 80 | 80 | 40 | 100

a returns this

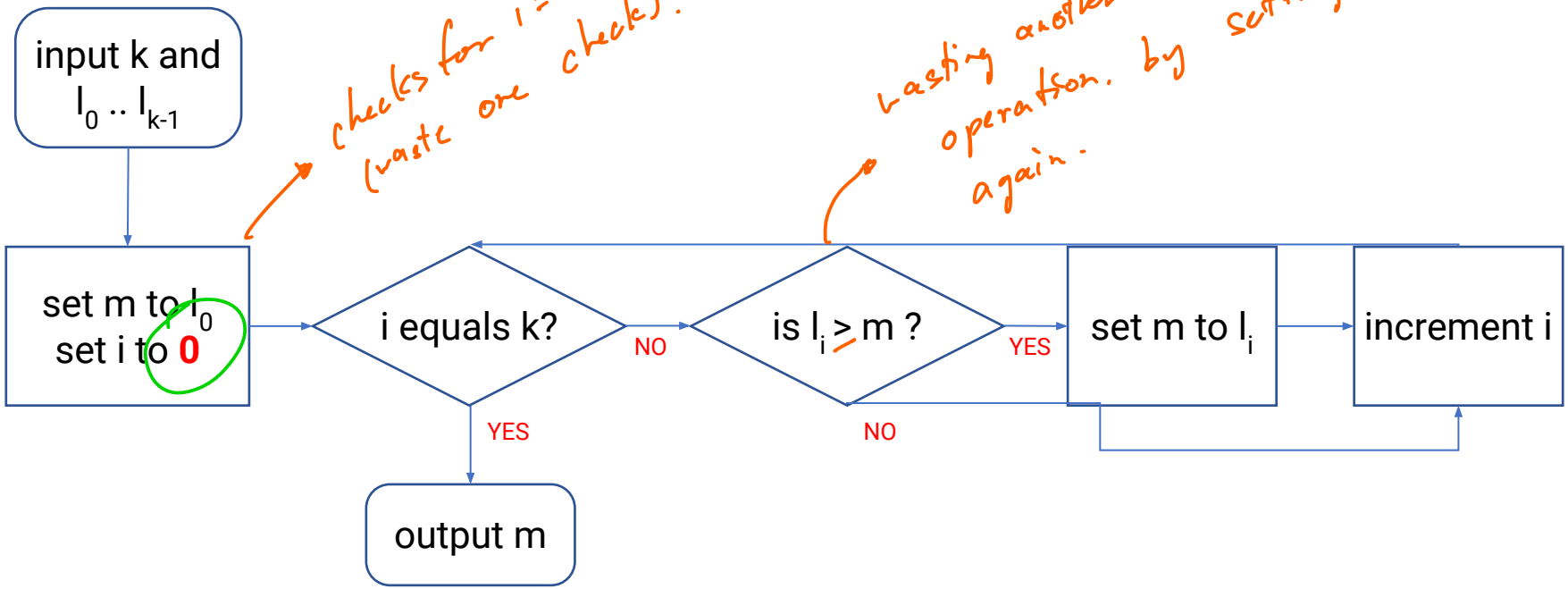
b returns this

Problem 1.1(b)

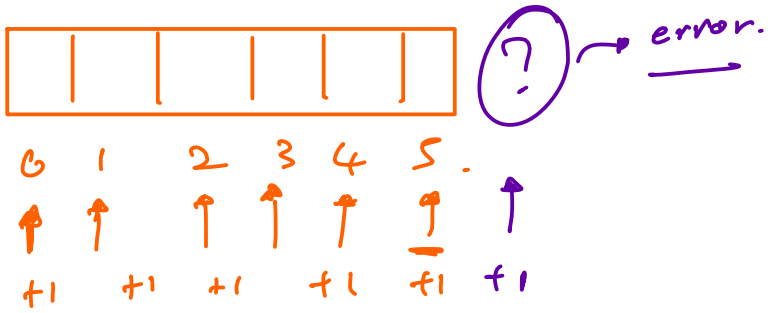
Redundant check
when you have $I_i = m$,
you will now set m to I_i

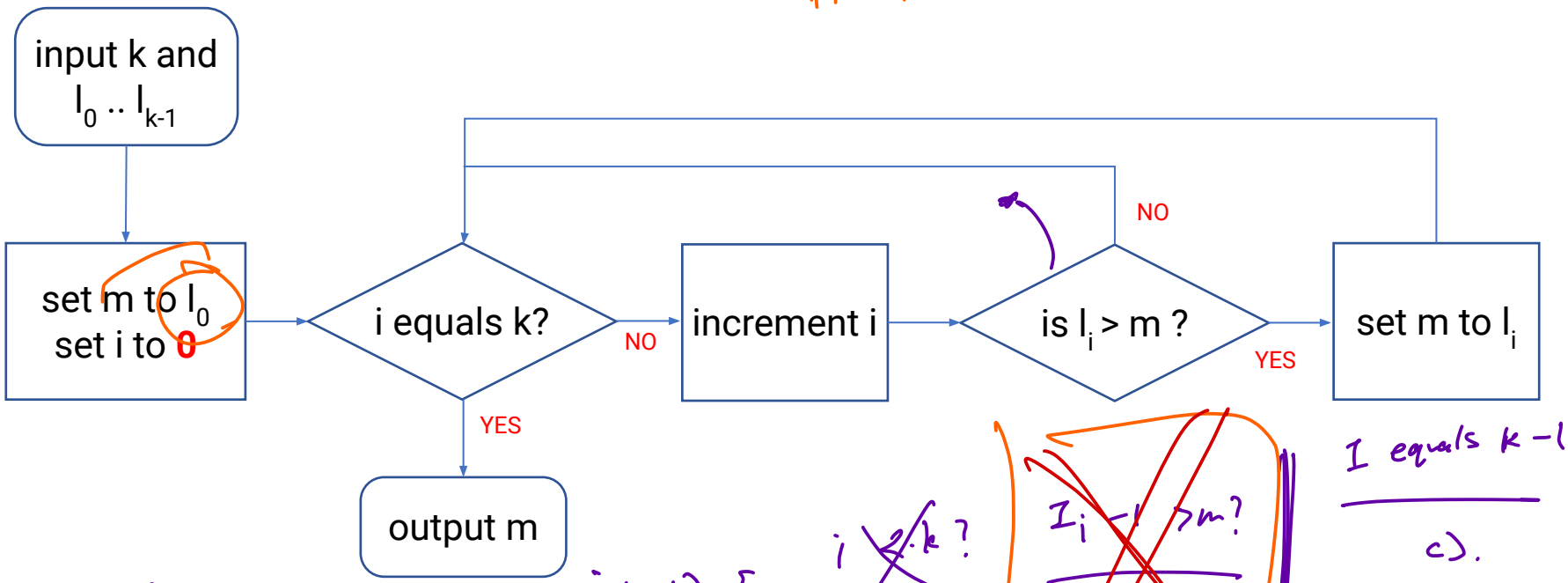


Problem 1.1(c)

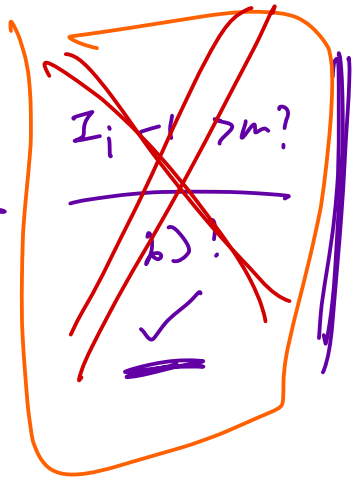

input k and
l_0 .. l_{k-1}
set m to l_0
set i to 0
i equals k?
NO
YES
output m
is $l_i \geq$ m ?
YES
NO
set m to l_i
increment i
checks for i=0, where m=l_0. (waste one check).
Lasting another operation. by setting m=l_0 again.

Problem 1.1(d)






```
for (i = 0; i < size; i += 1) {
    //do something.
}
```

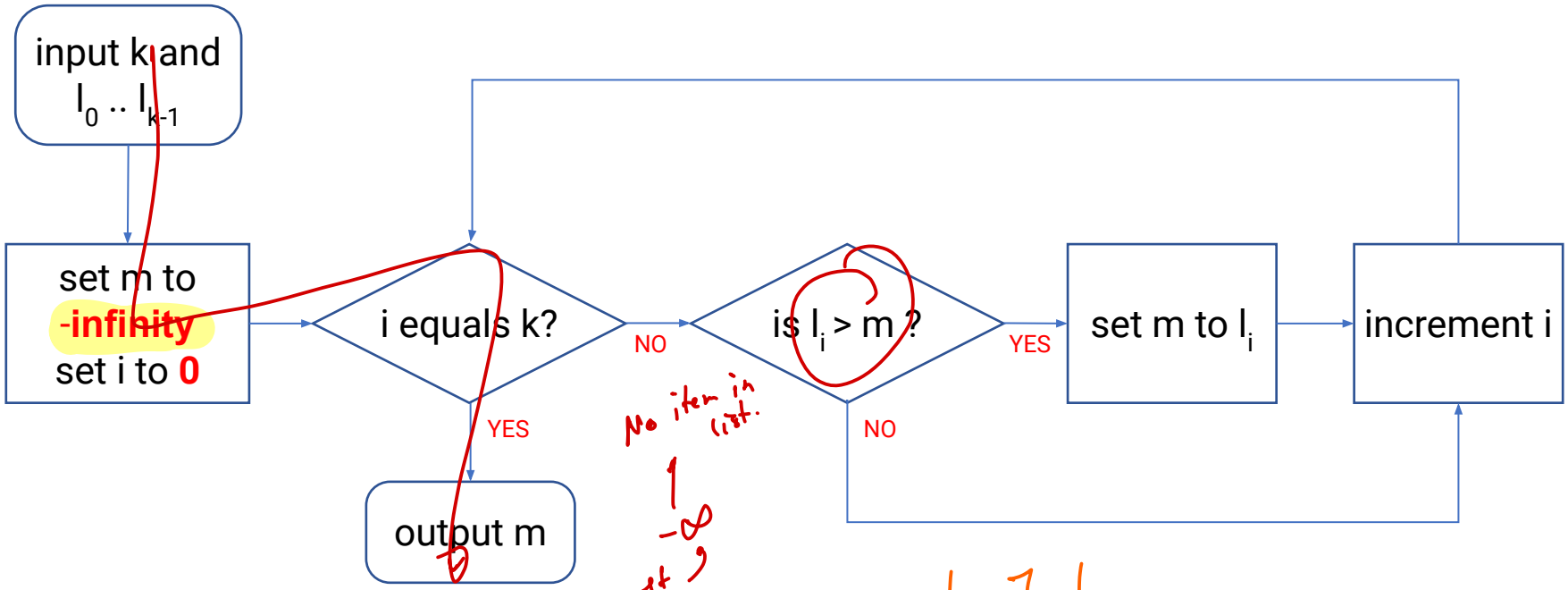



I equals k-1

c).

1) Whether an Array / list is empty
2) This works with -ve numbers.

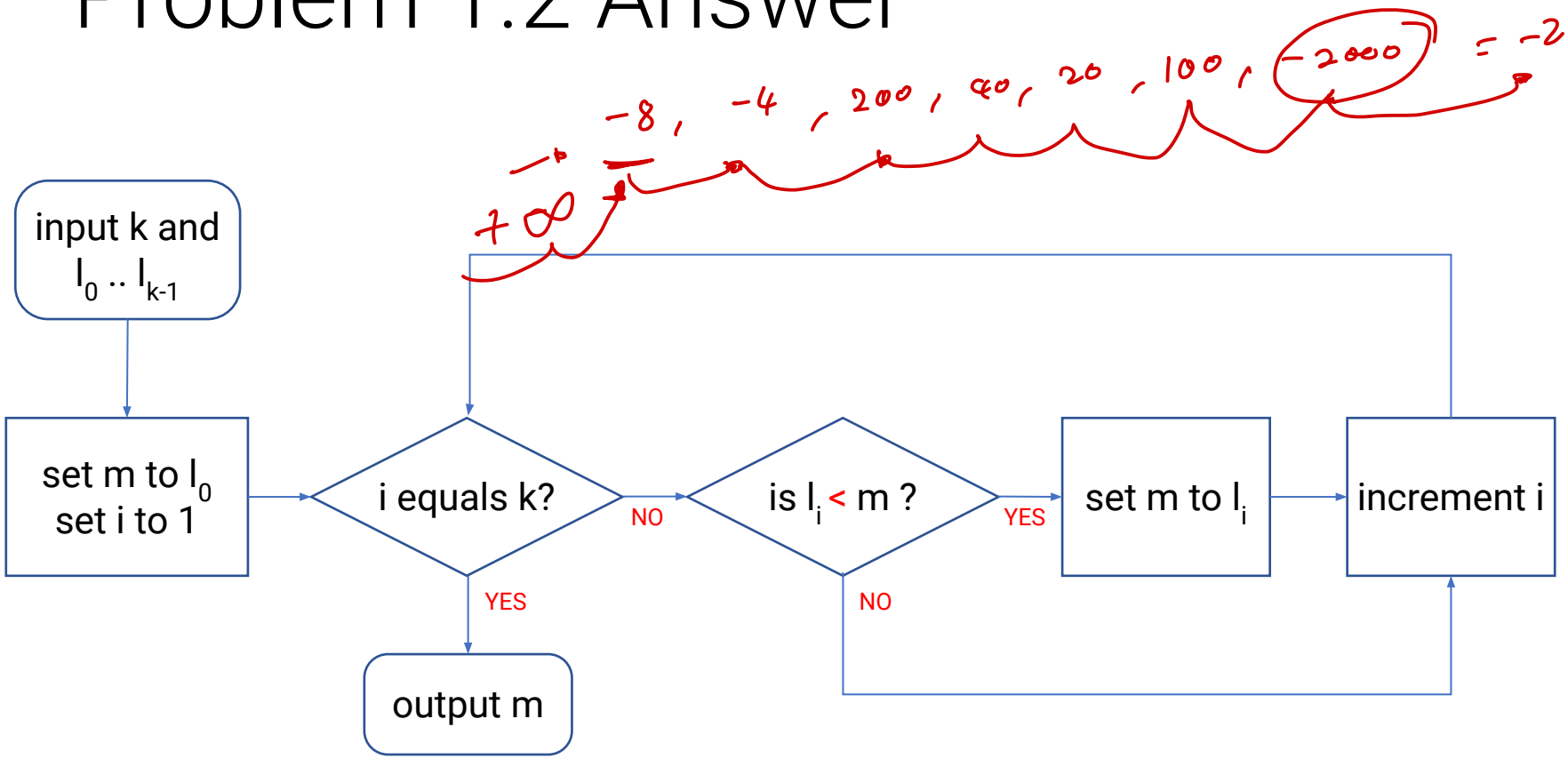
Problem 1.1(e)



Problem 1.2

- Change the algorithm above to find the minimum value instead of the maximum value from the given list L= $\{l_0,\ldots,l_{k-1}\}$.

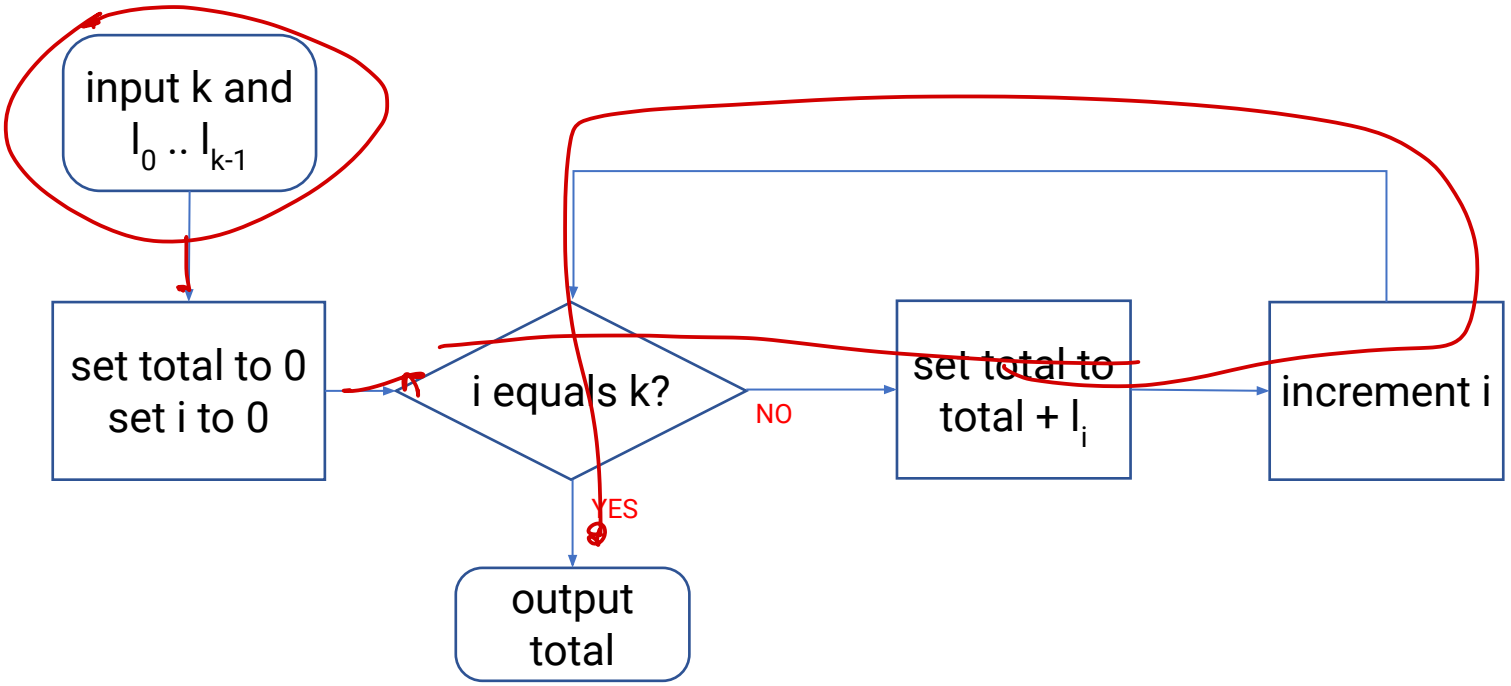
Problem 1.2 Answer



Problem 1.3

- Draw the flowchart for an algorithm, that takes in a list of integers $L = \{l_0,\ldots,l_{k-1}\}$, $k \geq 0$, and compute the *sum* of all the integers. Think about what variable(s) do you need.

Problem 1.3 Answer



Accessing PE accounts

Any issues?

UNIX walkthough

- https://nus-cs1010.github.io/2021-s1/unix.html

CS1010 I/O Library

- https://nus-cs1010.github.io/2021-s1/library.html