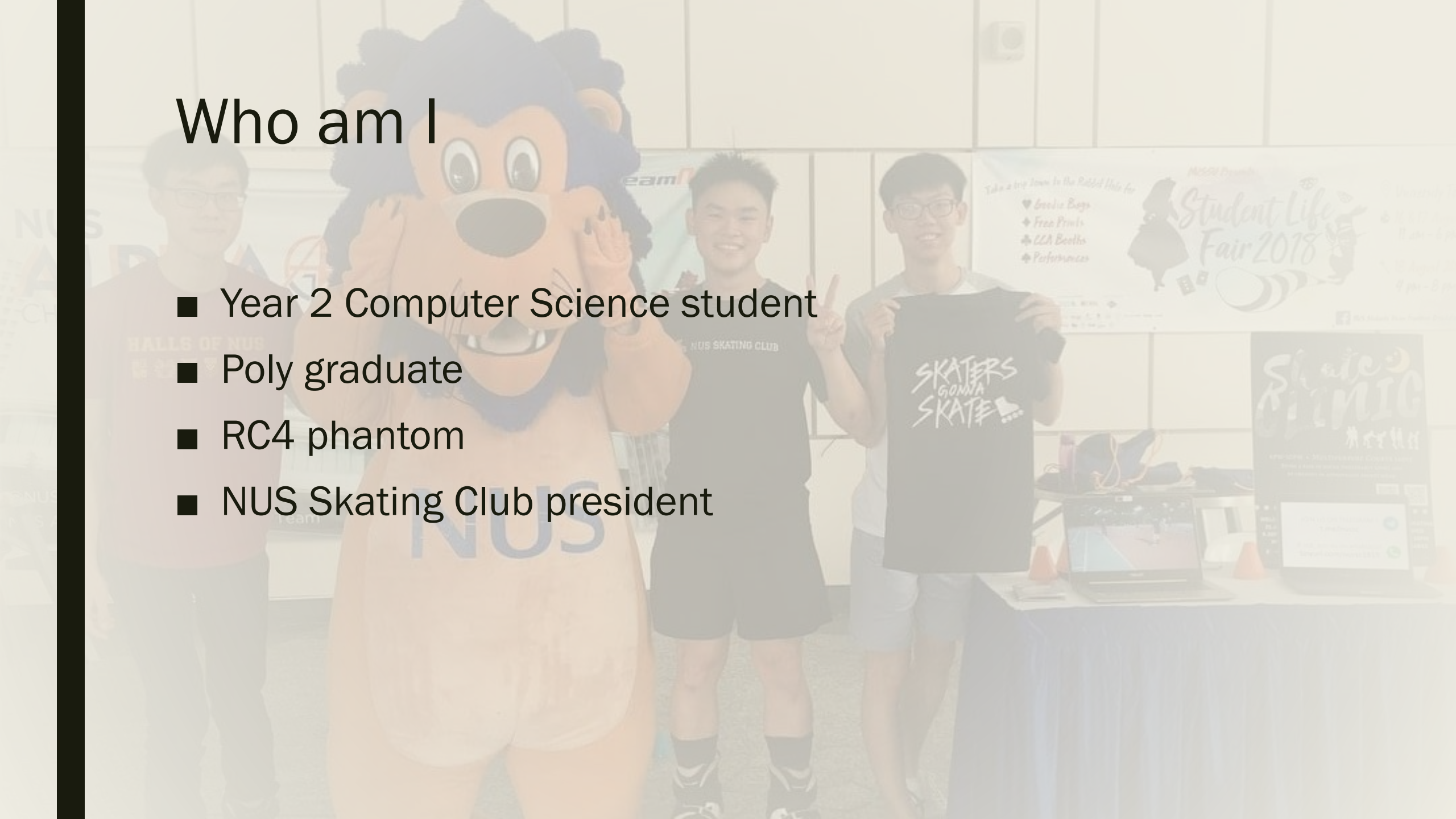
CS1010

https://t.me/cs1010isfun

Who am I



- Year 2 Computer Science student
- Poly graduate
- RC4 phantom
- NUS Skating Club president

Who are you?

- Name
- Course
- Favourite food
- Hobby or any other fun fact if you want

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More about me

- First time teaching and never took CS1010/CS1101S.
- Not a tech god (B+/A- student).
- Tutorial attendance is compulsory (for me).
  - *Hope to have meaningful and fun tutorials*

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Mutual understanding

- No forced participation
- Do your own work / leave early
- Don’t distract your classmates
- Don’t expect me to spoon feed you

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More than UDL?

- You can ask me about anything:
  - *What module to take*
  - *Where to eat*
  - *What CCA to join*
- You can jio me for Gong Cha

Admin (In-class)

- End tutorial at least 15 mins early
  - *Tutorial segment: Recap and go through problem sets*
  - *Lab segment (free & easy): 1-1 assistance*
- Emphasis on self-directed learning
  - *Less boring*
  - *More effective*

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Admin (Out-of-class)

- Telegram or email: evantay@comp.nus.edu.sg **for admin matters only**
  - *Attendance update*
  - *Exam / Mid-term timetable clashes*
  - *Assignment deadline extension*

Admin (Out-of-class)

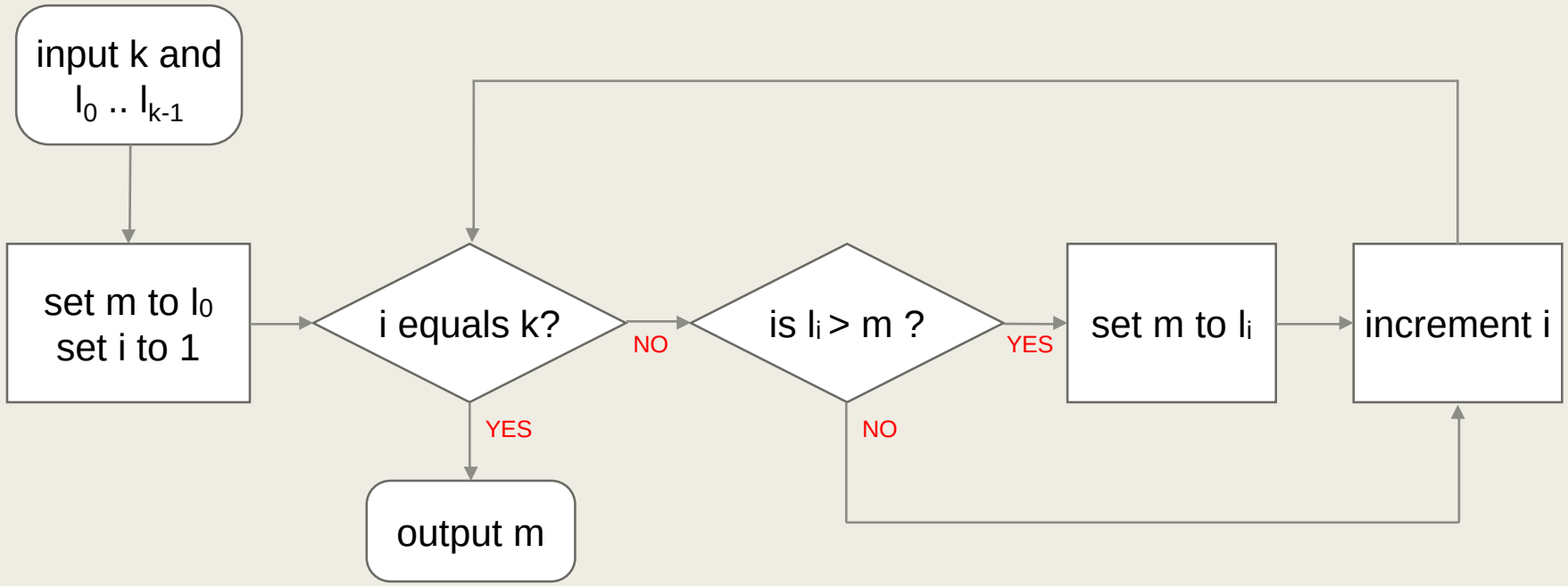
- **For academic questions:** Post all question on https://piazza.com
  - *I will NOT reply any questions outside of Piazza and tutorial/consultation slots.*
- **Why Piazza?**
  - *Speed, accuracy and efficiency*

Today's plan

- Tutorial Segment
  - *Recap of lecture content (Units 1 to 2)*
  - *Discussion of problem sets (PS1)*
- Lab Segment
  - *Access Programming Environment*
  - *UNIX Walkthrough*
  - *Compiling and running C programs (If time permits)*

Recap [Lec 1, Slide 62]

Finding the maximum *m* in a list *l* of length *k*.



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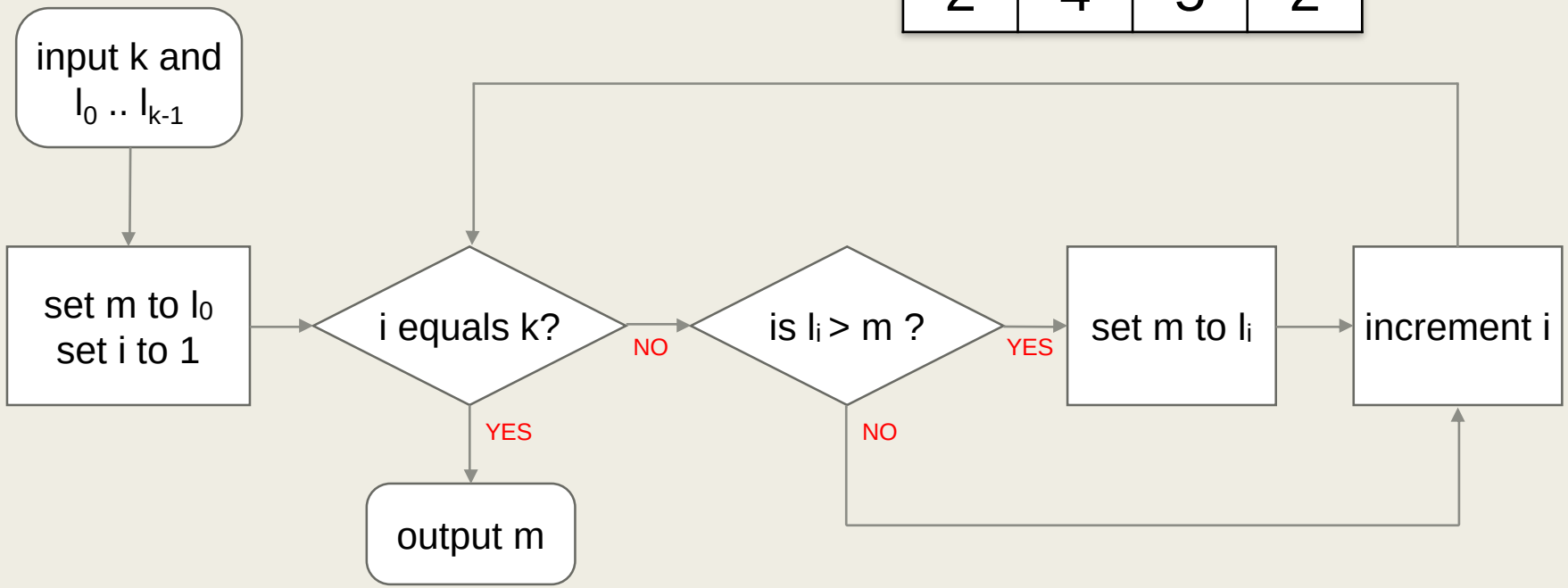
Recap [Lec 1, Slide 62]

Finding the maximum *m* in a list *l* of length *k*.
Assuming *k = 4*,

l_0	l_1	l_2	l_3
2	4	5	2



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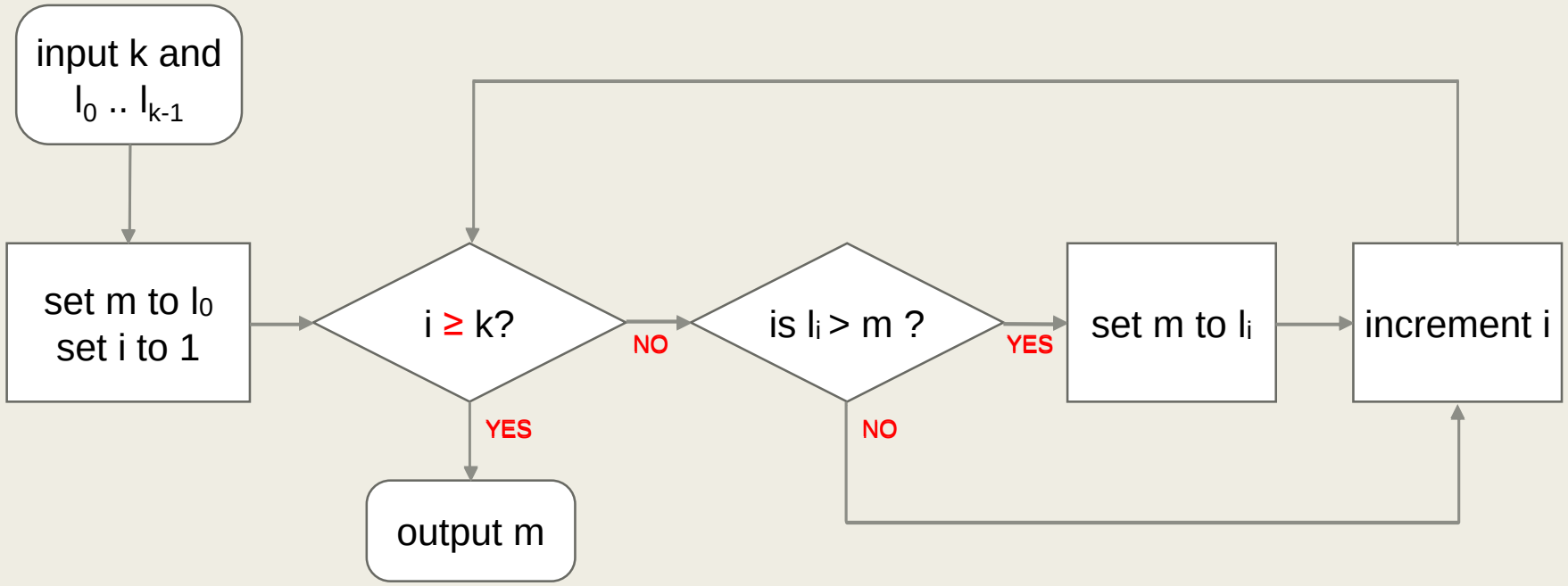
Problem Set [1.1a]

Does changing i equals k to i >= k change the output?



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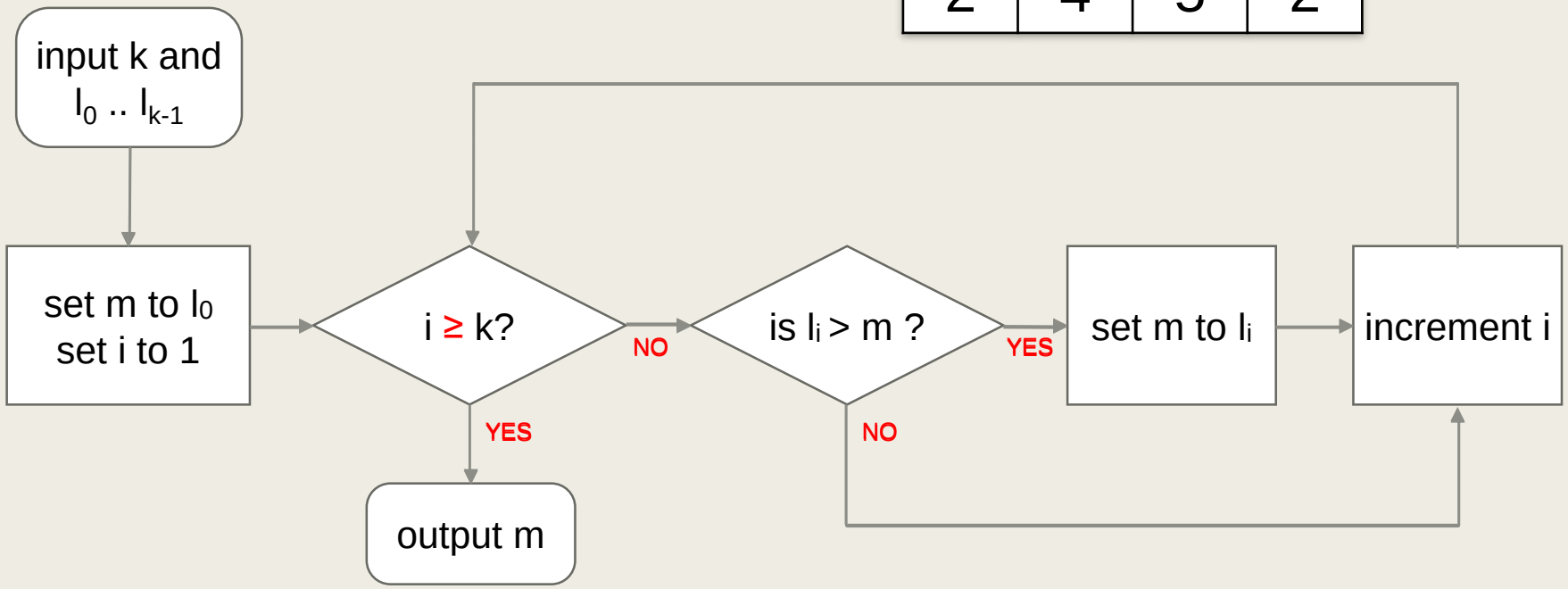
Problem Set [1.1a]

Does changing i equals k to i >= k change the output?

l_0	l_1	l_2	l_3
2	4	5	2



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l_0	l_1	l_2	l_3
2	4	5	2

Problem Set [1.1a]

Does changing i equals k to i >= k change the output?

	i equals k	i >= k
i < k	False	False
i = k	True	True
i > k	False	True

Since (1) i and k are integers, (2) i starts with 1, (3) i is incremented by 1 each time, (4) program terminates at i = k for both

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l_0	l_1	l_2	l_3
2	4	5	2

Problem Set [1.1a]

Does changing i equals k to i >= k change the output? No

	i equals k	i >= k
i < k	False	False
i = k	True	True
i > k	False	True

Since (1) i and k are integers, (2) i starts with 1, (3) i is incremented by 1 each time, (4) program terminates at i = k for both, we will never reach i > k.

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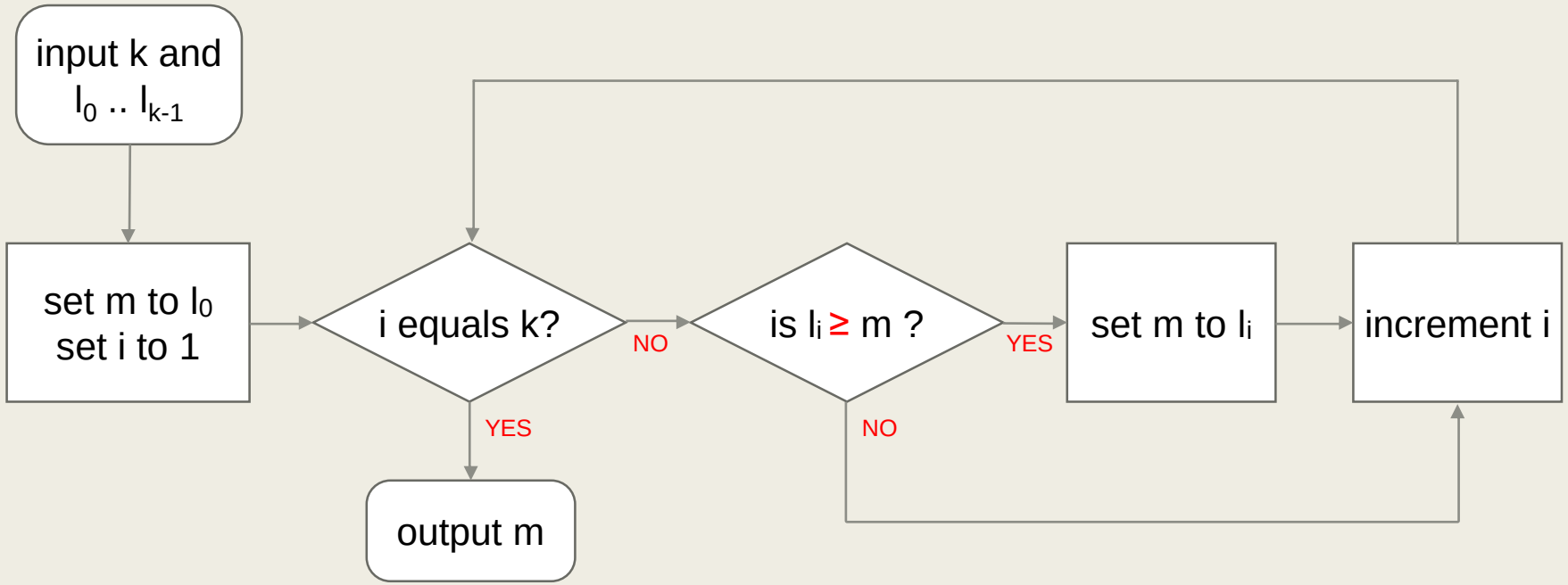
Problem Set [1.1b]



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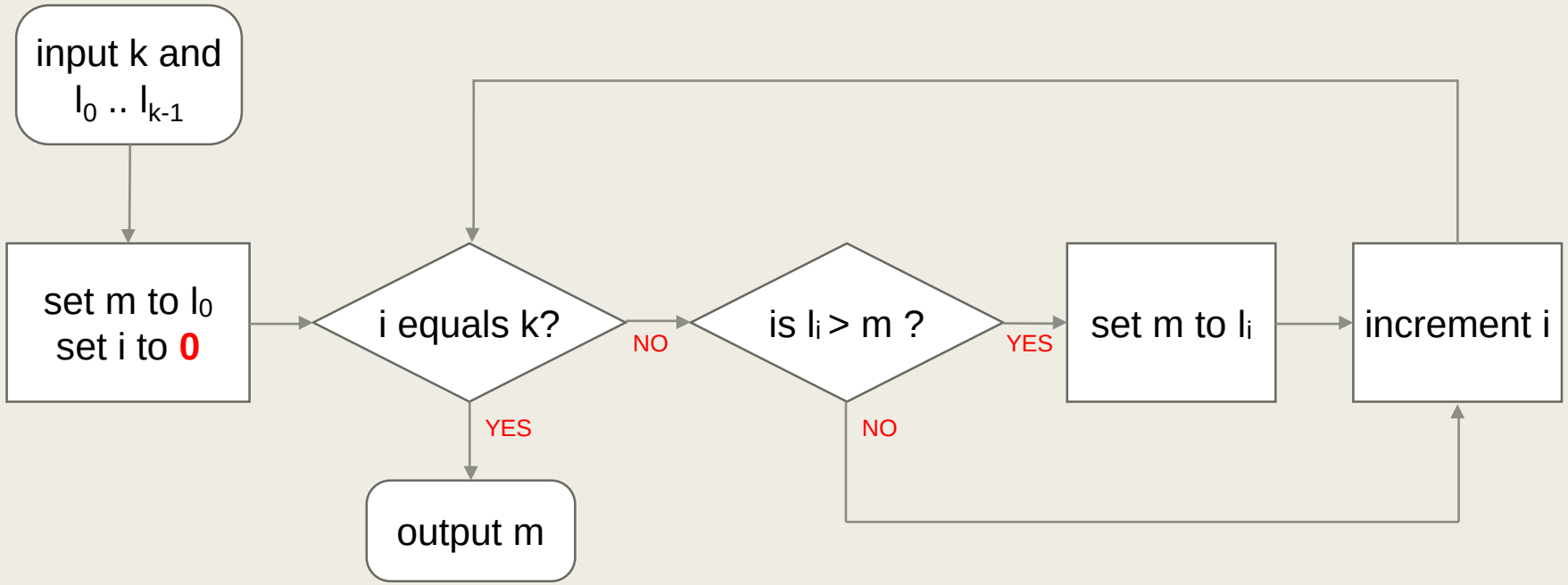
Problem Set [1.1c]



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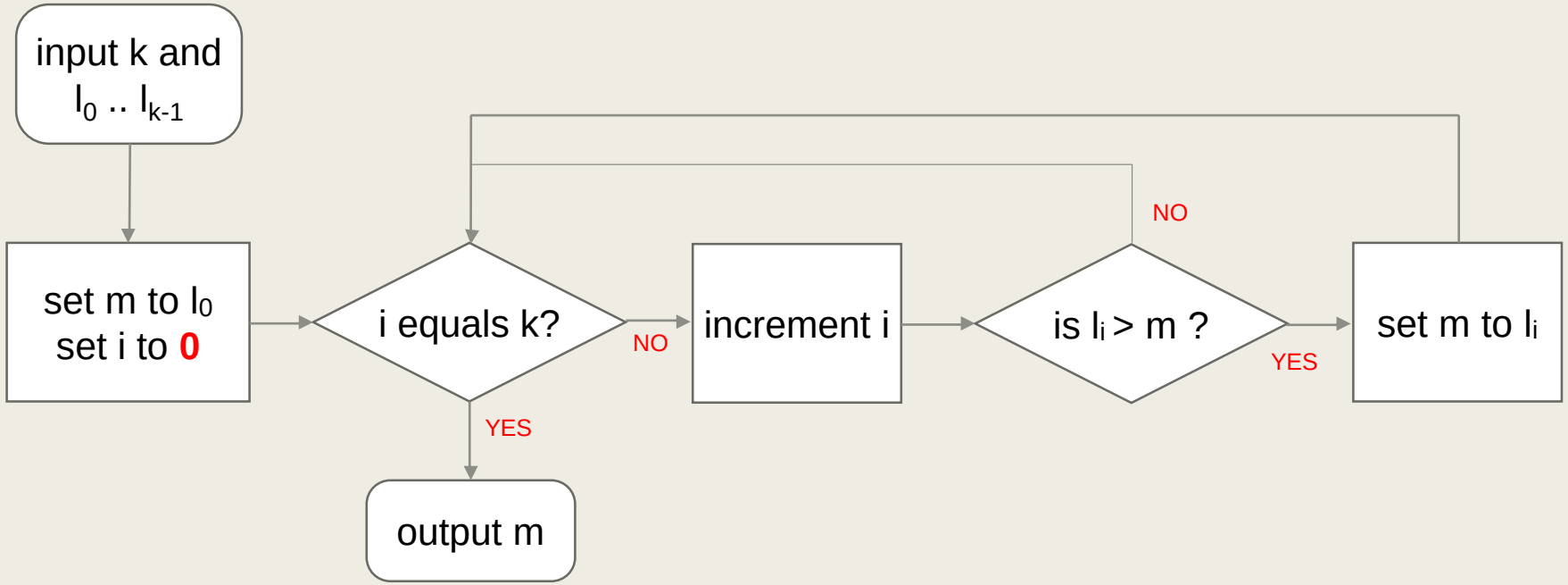
Problem Set [1.1d]



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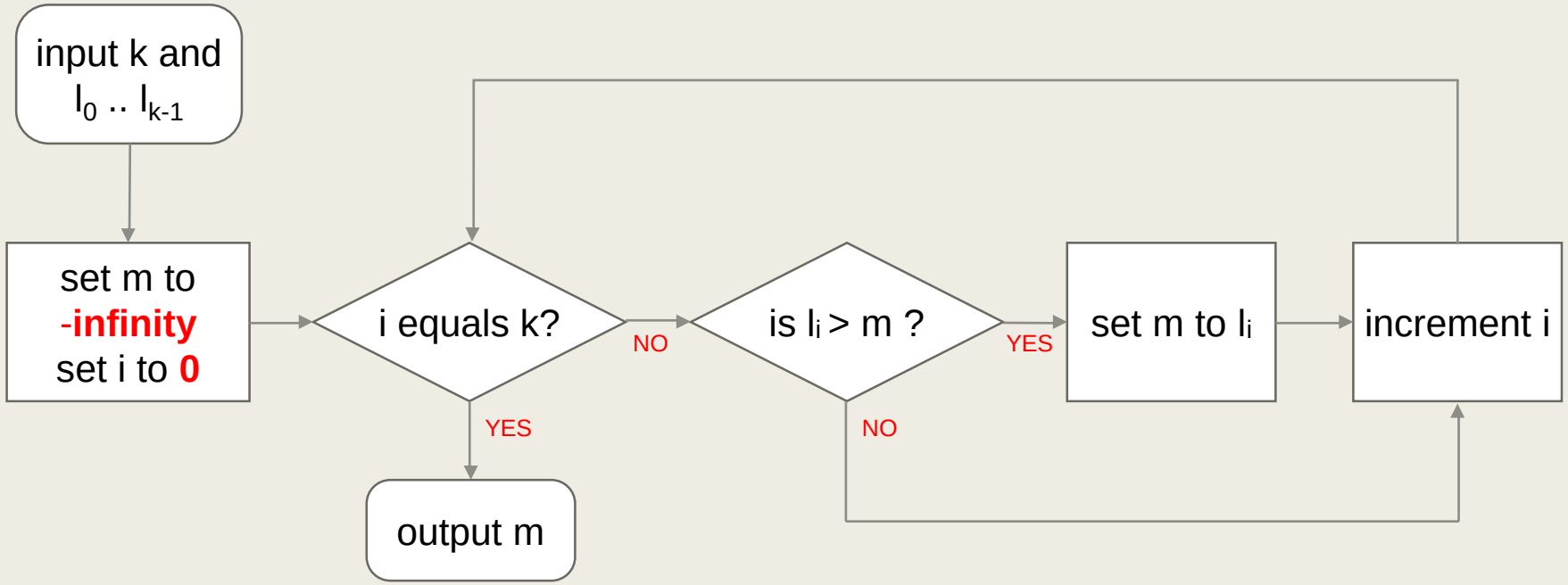
Problem Set [1.1e]



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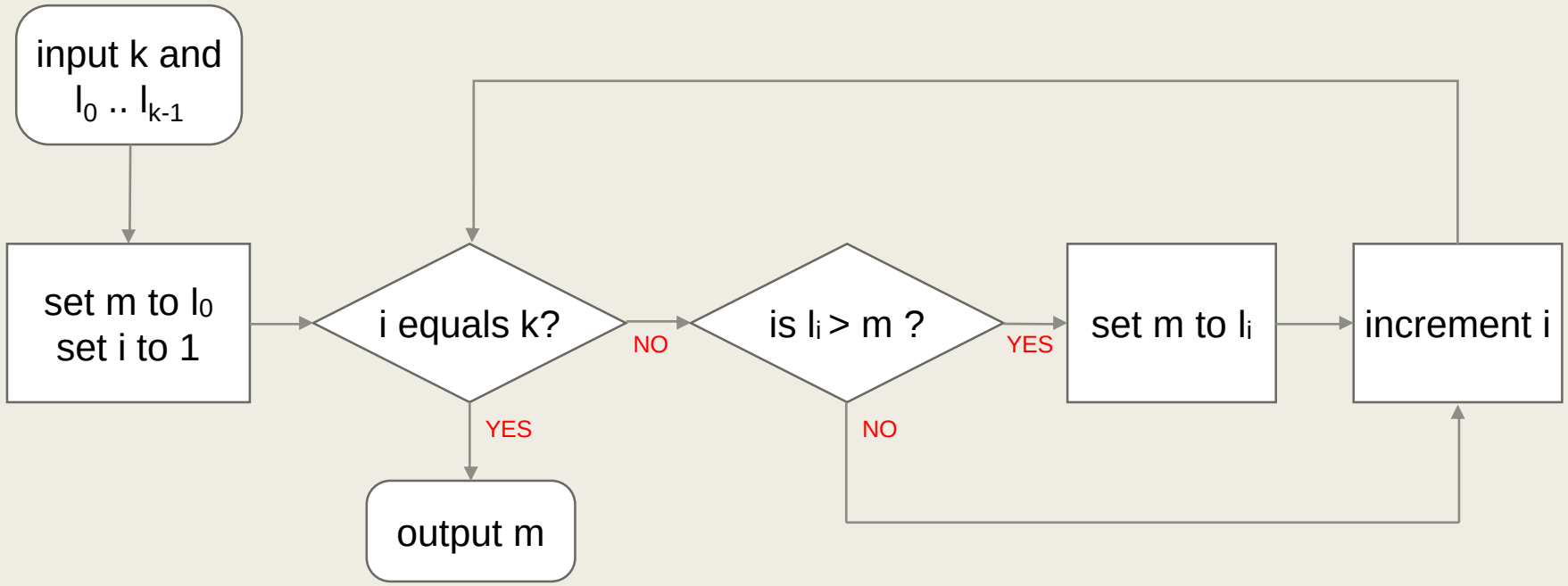
Problem Set [1.2]

Finding the **minimum** *m* in a list *l* of length *k*.



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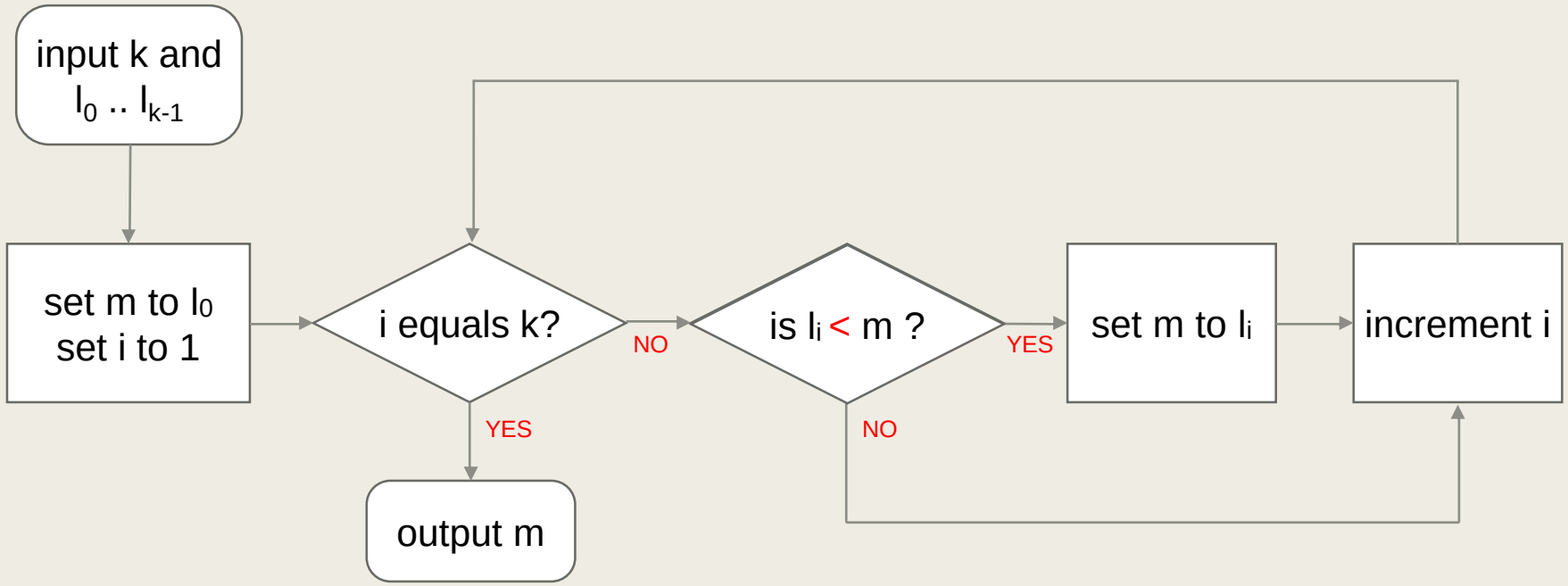
Problem Set [1.2]

Finding the **minimum** *m* in a list *l* of length *k*.



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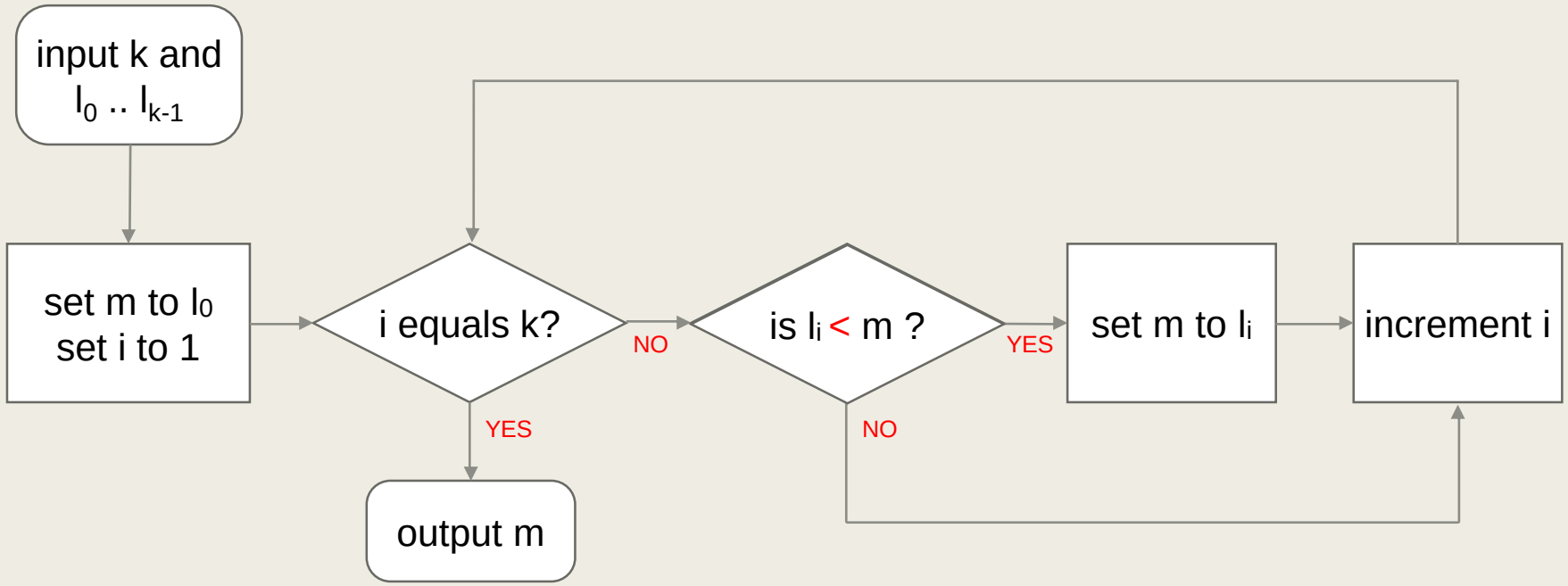
Problem Set [1.3]

Finding the **sum** *s* in a list *l* of length *k*.



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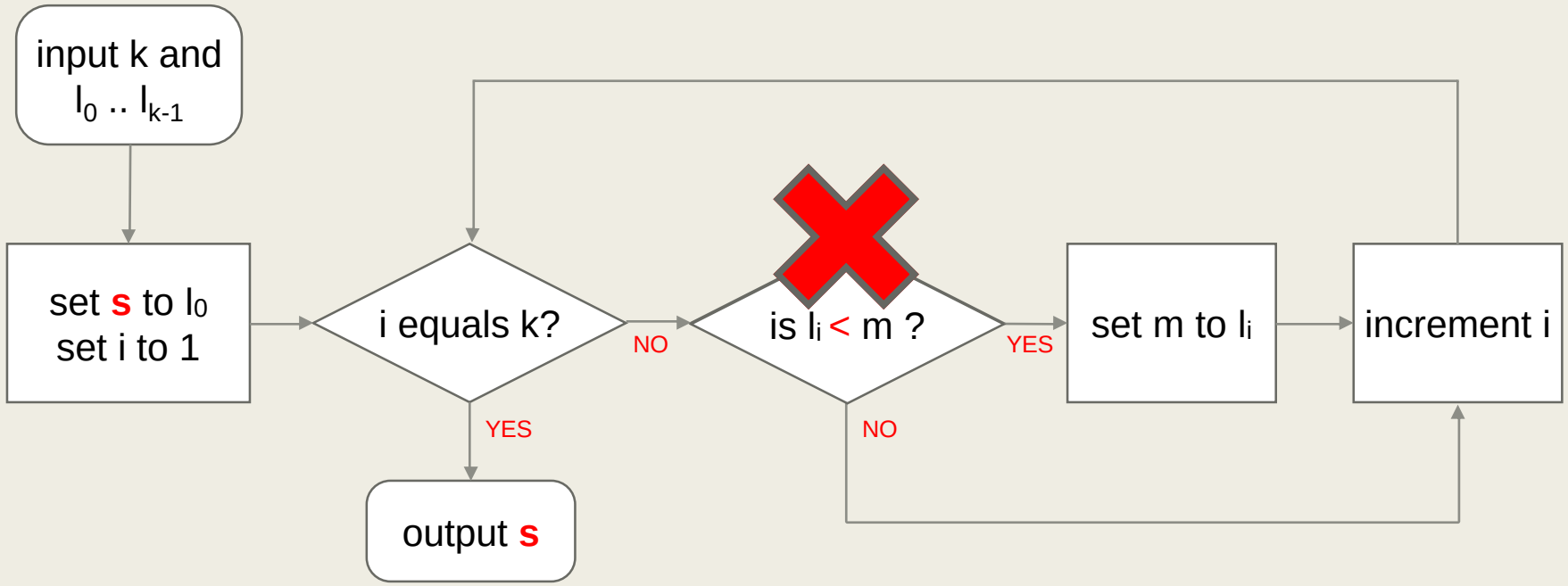
Problem Set [1.3]

Finding the **sum** s in a list *l* of length *k*.



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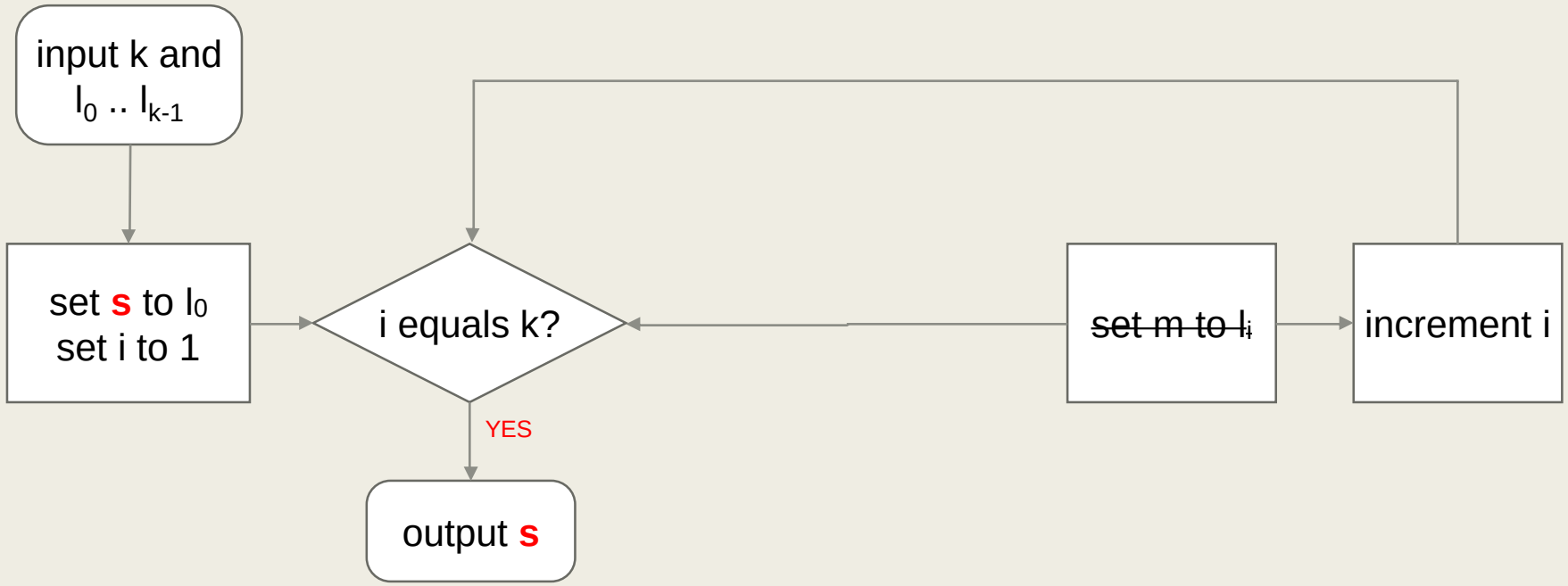
Problem Set [1.3]

Finding the **sum** s in a list *l* of length *k*.



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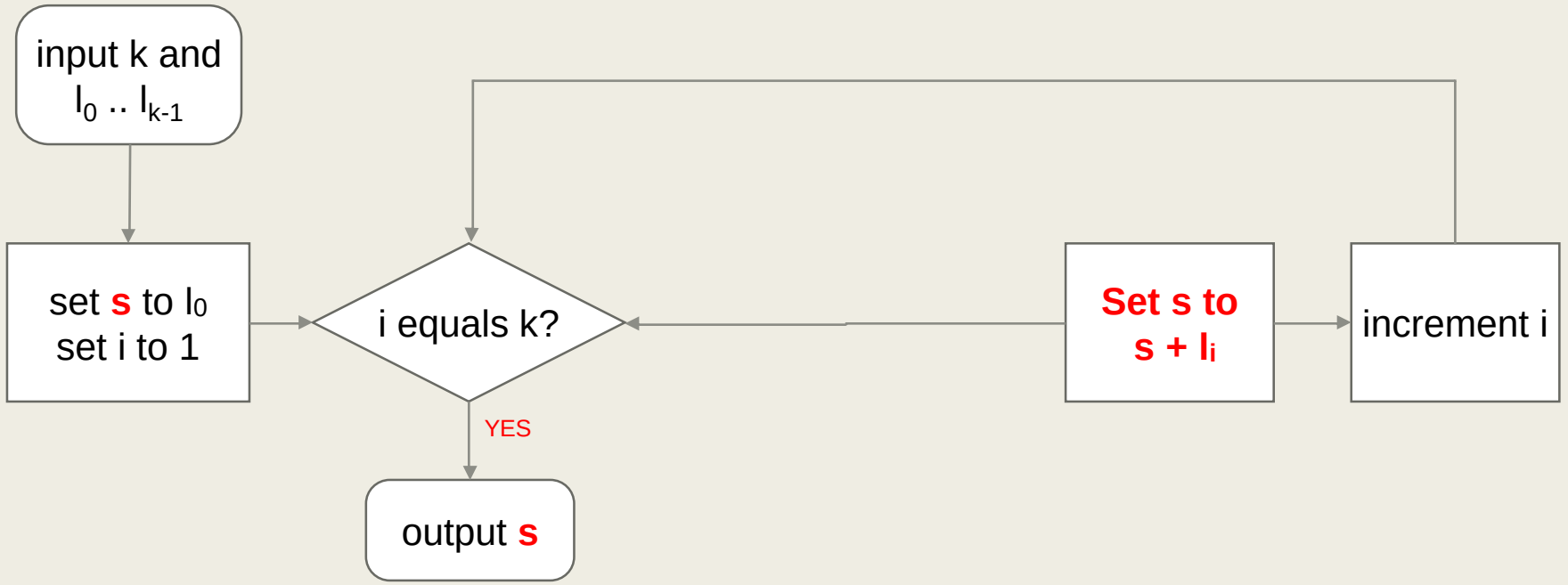
Problem Set [1.3]

Solution 1

Finding the **sum** s in a list *l* of length *k*.

l_0	l_1	l_2	l_3
2	4	5	2



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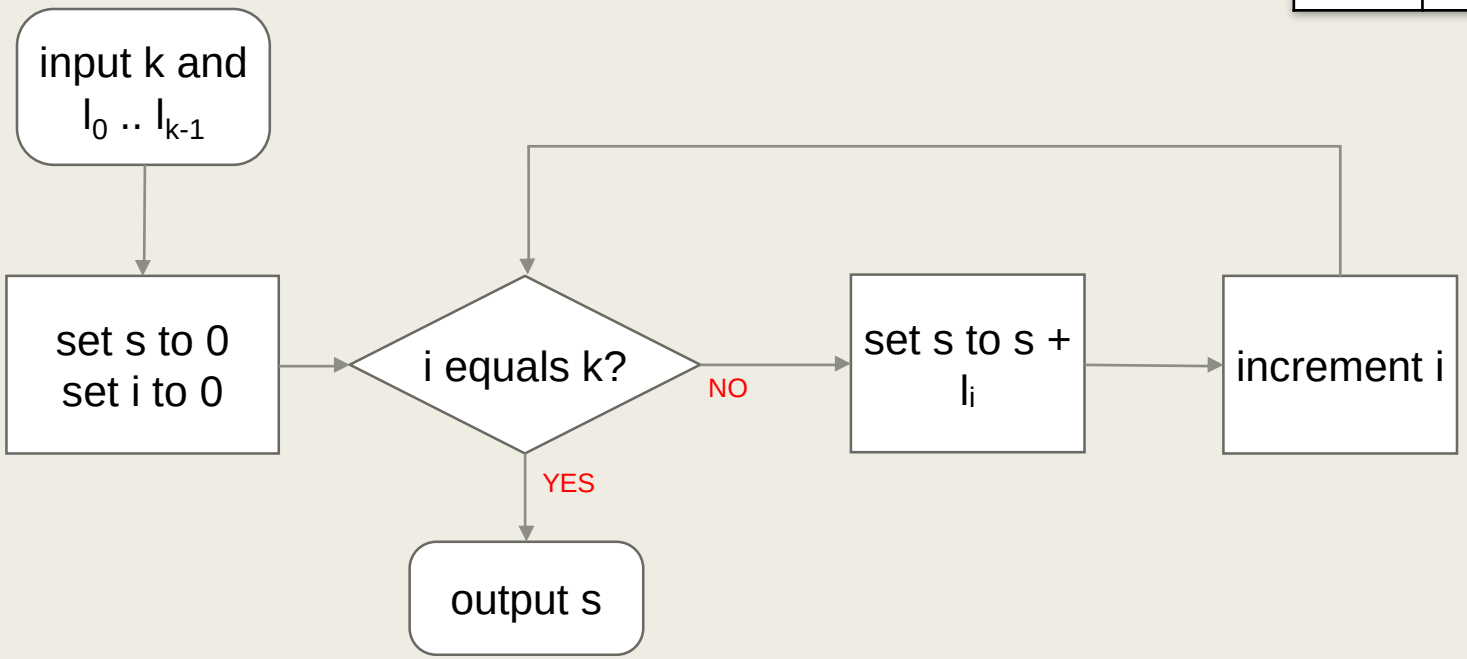
Problem Set [1.3]

Solution 2

Finding the **sum** s in a list *l* of length *k*.

l_0	l_1	l_2	l_3
2	4	5	2



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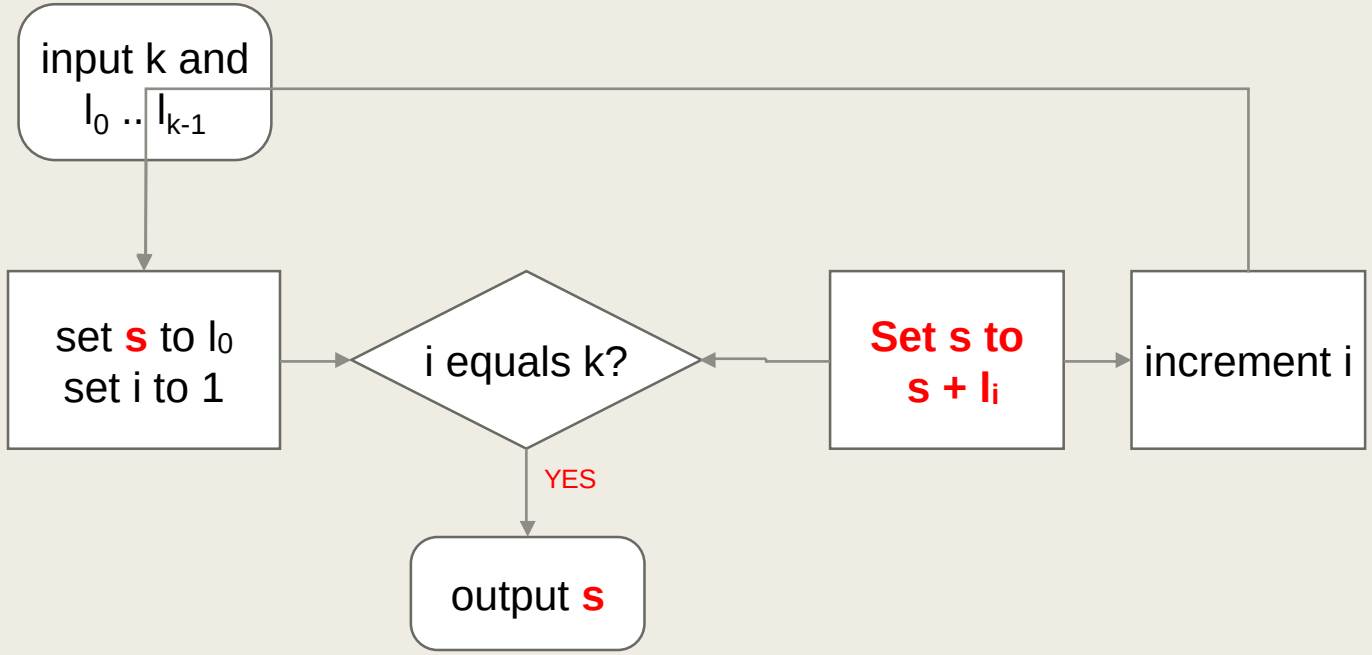
Solution 1 vs Solution 2

l_0	l_1	l_2	l_3
2	4	5	2

- **Solution 1**
  - *Set s = l_0 (2)*
  - *s = s (2) + l_1 (4)*
  - *s = s (6) + l_2 (5)*
  - *s = s (11) + l_3 (2)*
  - *s = 13*



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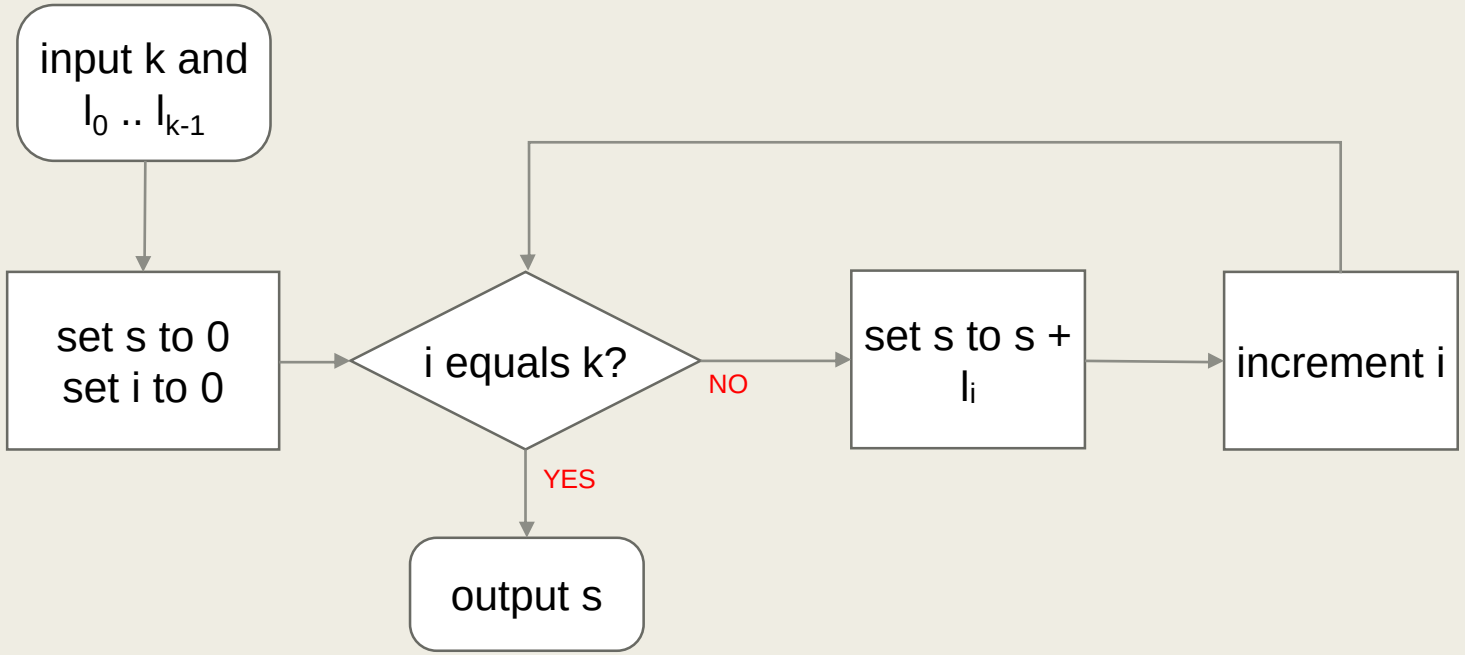
Solution 1 vs Solution 2

l_0	l_1	l_2	l_3
2	4	5	2

- **Solution 2**
  - *Set s = 0*
  - ***s = s (0) + l_0 (2)***
  - *s = s (2) + l_1 (4)*
  - *s = s (6) + l_2 (5)*
  - *s = s (5) + l_3 (2)*
  - *s = 13*



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TUTORIAL OVER

Free-and-easy lab next

Lab segment

- Access Programming Environment: https://nus-cs1010.github.io/1819-s1/environments/index.html
- UNIX Walkthrough: https://nus-cs1010.github.io/1819-s1/unix/index.html
- Compiling and running C programs: https://nus-cs1010.github.io/1819-s1/clang/index.html

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Lab tips for Unix

- Use `man` to learn more about a command.
  - *i.e. man pwd*
- Things to learn:
  - *pwd, cd, ls, cp, mv, rm, mkdir, rmdir*
- Paths to understand:
  - “.”, “..”, “~”

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THE END

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