

Learning Goals (Today)

- Define Algorithms
- Understand Course Structure
- Develop Group Work Strategies

Announcements

- Office Hours: T/Th: 12:30-1:30, 3:30-4:00 Today
↑
- Upcoming Assignments: Getting to know you quiz, Rough Draft, exit fix
- Course Assistant Drop-in Hours TBD
- Lecture notes, video ↖ only accessible to our class
- Weekly schedule
- What I did over the summer

Which are algorithms?

A. Travel to Cambridge

Not
Clearly defined

B. `int i = 1;
while (i < 5) {
 i = i * -1;
}`

Not
finite

C. function `Fib(i)` ✓

- Input: integer $i: i \geq 0$
 - Output: i^{th} Fibonacci number
- If $i \in \{0, 1\}$ then return i
Return $\text{Fib}(i-1) + \text{Fib}(i-2)$

Alg def

A finite, clearly defined sequence of instructions for carrying out a task.

No task

D. `public static void fun(int j) {
 int k = 1;
 k++;
}` ↓

Plan for Semester

Frameworks:
Paradigms

Divide +
Conquer

Greedy

Dynamic
Programming



Tasks:

Describe
(pseudocode/java)

Prove
correctness

Analyze
Runtime

Considering
Ethic of
Implementations

+ NP-Completeness (comparing difficulty of problems)

go/cs302

Learning Goal: Become a better learner + collaborator



Think of something you are good at.

How did you get good at it?

Did you ever make mistakes?

What did you do when you made a mistake?

• Psets → Effort

• Quizzes,
Assessments



unlimited revisions

Credit/no credit

Group work: in class, not graded, help to learn

Announcements ↴