

## 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

Alg def

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

C. function Fib(i) ✓

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

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 ↴