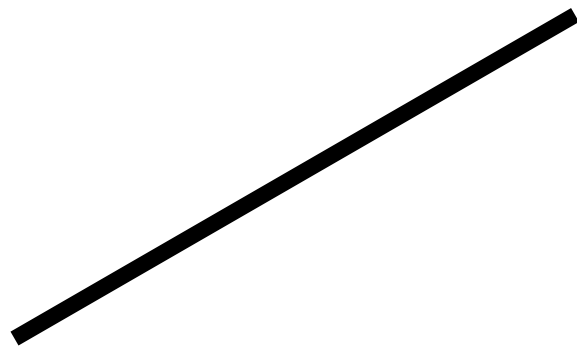# This is CS50.

Taking Attendance

1. Stand up and think of the number 1.
2. Pair off with someone standing, add your numbers together, and one of you sit down.
3. Go back to step 2.

Today

Welcome

Values

Scratch

what ultimately matters in this course is not so much where you end up relative to your classmates but where you end up relative to yourself when you began

David J. Malan, Instructor

Carter Zenke, Preceptor

Mikel Davies, Teaching Fellow

Catherine Deskur, Teaching Fellow

Moshe Poliak, Teaching Fellow

Patrick Thornton, Teaching Fellow

William Cochran, Embedded EthiCS Fellow

Weekly Roadmap

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Lecture	Section + Lab	Section + Lab	Problem Set	Problem Set	Problem Set	Problem Set
	Quiz Due		**Lab Due**			**Pset Due**

Curiosity Encouraged
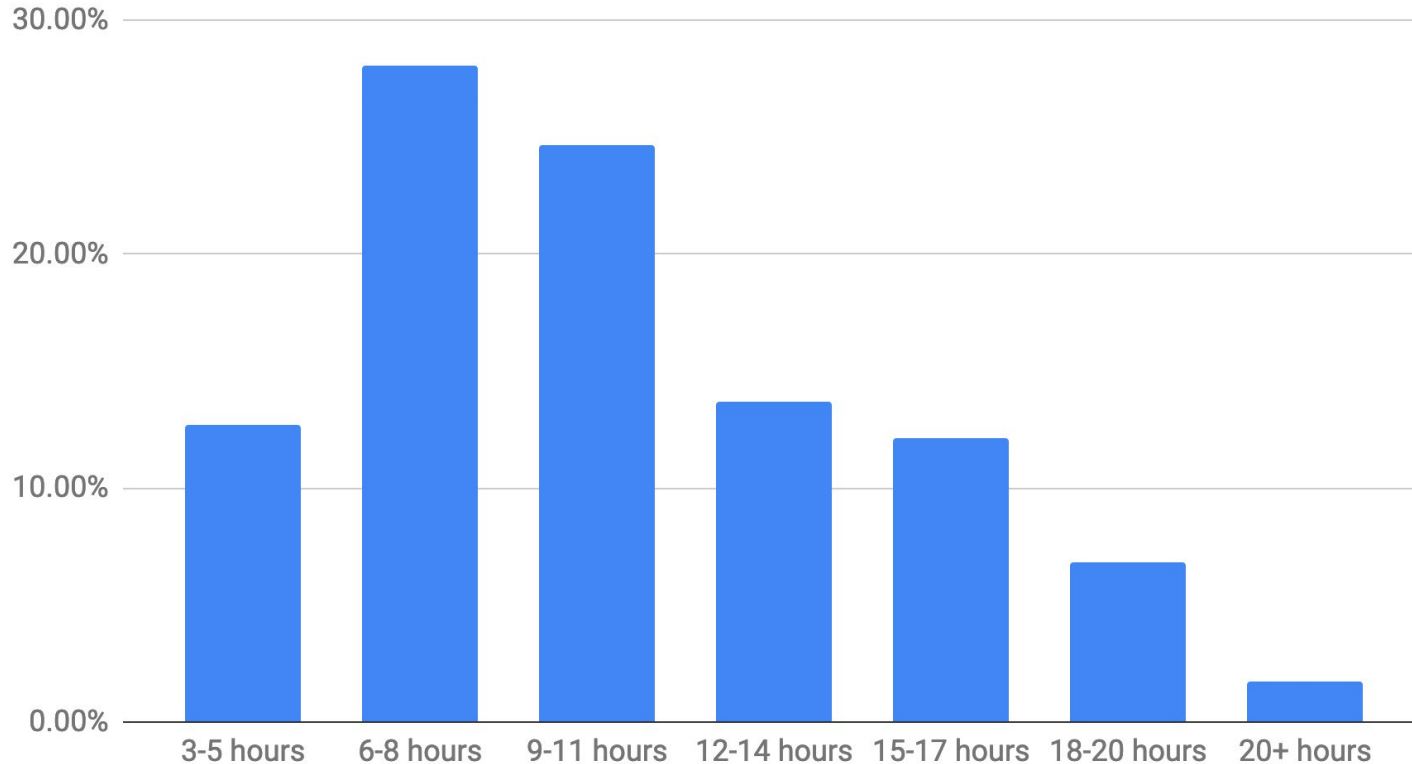
Honesty

"... be reasonable..."

When in doubt, ask.

For more information…

https://cs50.harvard.edu/college/2022/spring/info/

https://cs50.harvard.edu/college/2022/spring/orientation/

https://cs50.harvard.edu/college/2022/spring/syllabus/
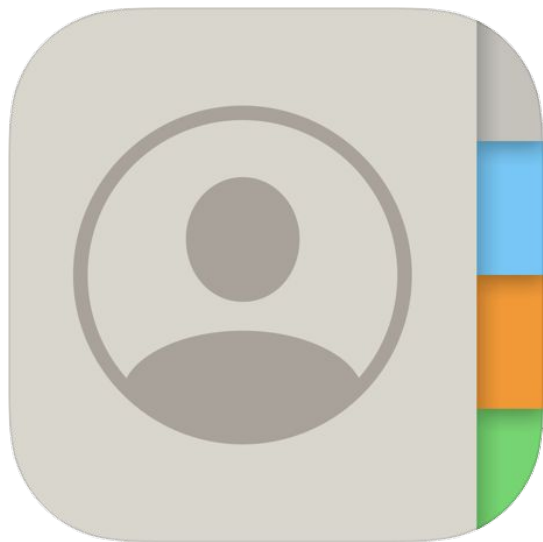
Axes

Axes

Correctness

Axes

Correctness

Design

Axes

Correctness

Design

Style

Axes

Correctness

Design

Style

Ethics

Ethics as the Fourth Axis

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- What is Embedded EthiCS?

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- Why embed ethics in the CS curriculum?

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Ethics as the Fourth Axis

- What is Embedded EthiCS?
    - Began in response to student interest.
    - A team of philosophers and computer scientists working together to integrate lessons on ethical reasoning into the CS curriculum.

- Why embed ethics in the CS curriculum?
    - It's no secret anymore that computing technologies can have a profound impact on the world.

Think-pair-share: What are some examples of new technologies that are having or have had such an impact? Or: what are some headlines you've seen in the news about technology and ethics more broadly?
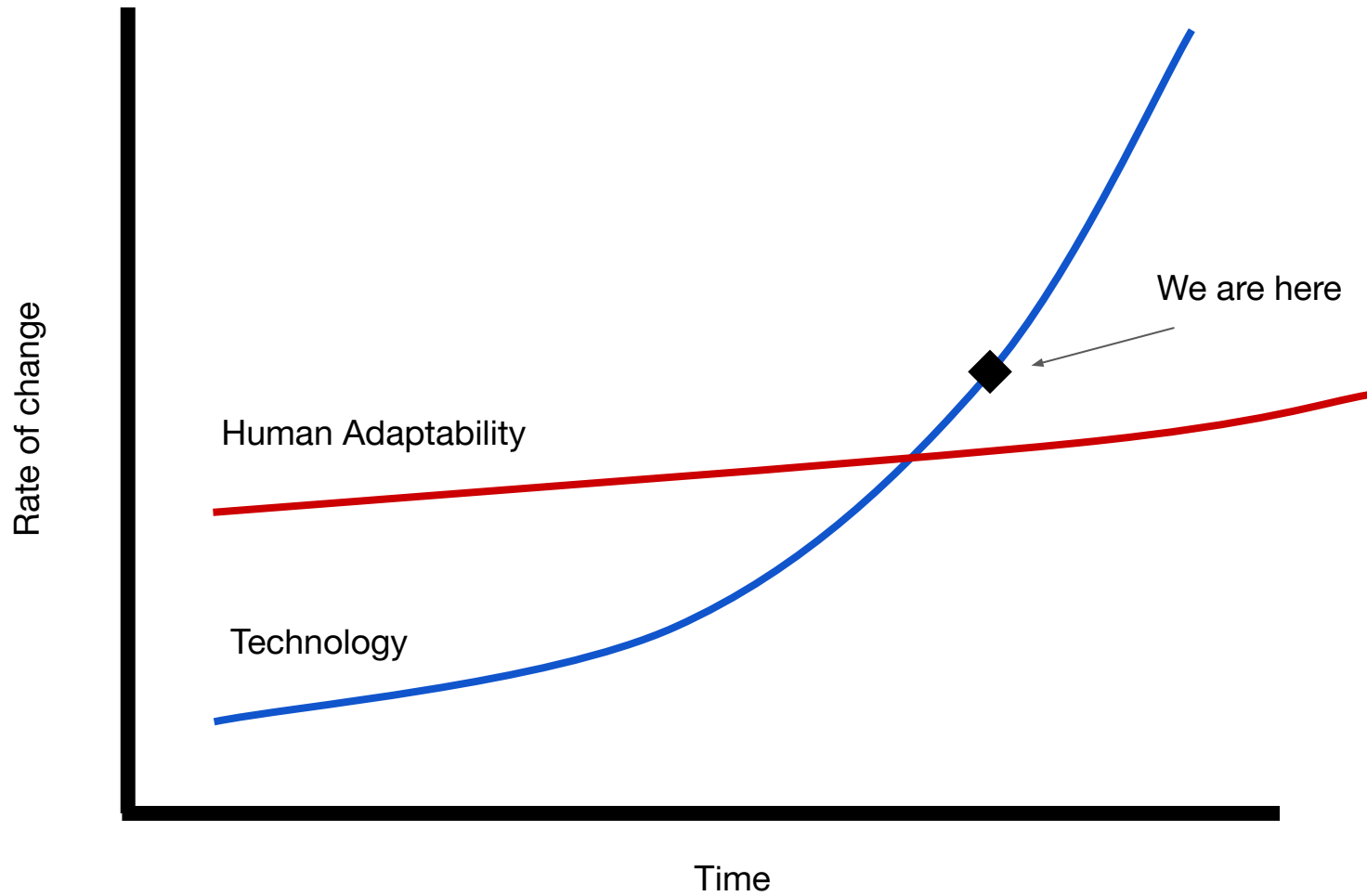
Answering the question: *should* I do this?

Answering the question: *should* I do this?

Small group activity: You're asked to implement a contacts application (as you've seen before in lecture). But now you're being asked to add a feature that recommends to users the people they call most frequently at certain times of the day.

What are some questions we could ask about our code to determine whether we should do this?

Take five minutes to talk with those at your table.

When we come back, I'll ask you to share your questions with the class.

Other possible questions

- Who will be impacted by what my code can do? (Who are the relevant stakeholders?)

- Could my code be misused? If so, how?

- What might be the unintended consequences of my code?

- Should I consult with an ethics expert?

Other possible questions

- Will my product preserve users' privacy?

- Might my code undermine users' autonomy?

- How might my code interfere with users' physical or emotional well-being?

- Will my code serve to promote fairness and justice, or could it exacerbate pre-existing inequalities?

Other possible questions

- Will my product preserve users' **privacy**?

- Might my code undermine users' **autonomy**?

- How might my code interfere with users' physical or emotional **well-being**?

- Will my code serve to promote **fairness and justice**, or could it exacerbate pre-existing inequalities?

Scratch
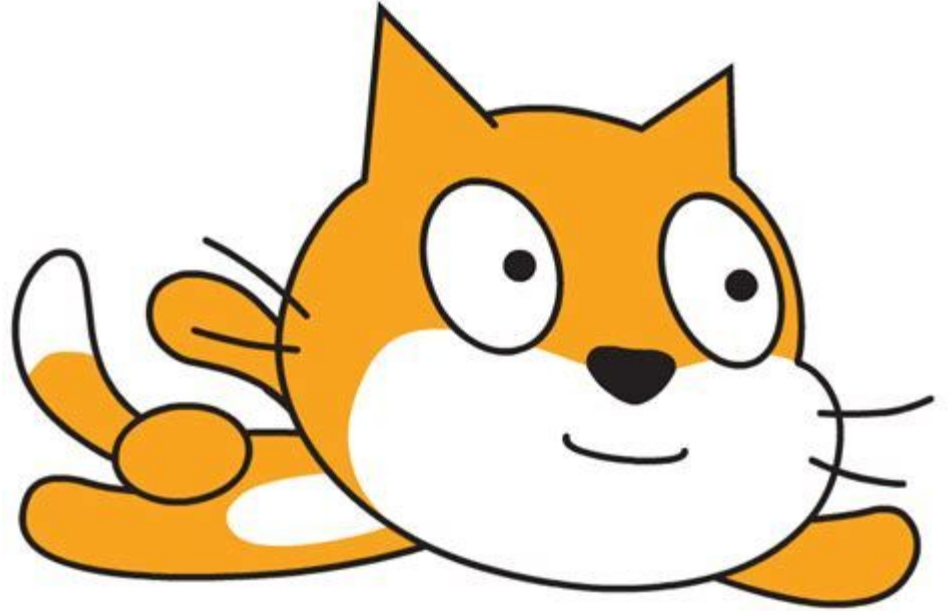
scratch.mit.edu

Vocabulary

Conditionals

Events

Functions

Inputs ("Arguments")

Loops

Variables

Boolean Expressions

Vocabulary

Conditionals

Events

Functions

Inputs ("Arguments")

Loops

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Boolean Expressions

when ⚑ clicked

When Clicked

Create a project where a user gets a surprise whenever they click on the stage or a sprite.

Inspiration Studio

https://scratch.mit.edu/studios/27320959/

Vocabulary

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Inputs ("Arguments")

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Loops

Add a repeat or forever block to your project.
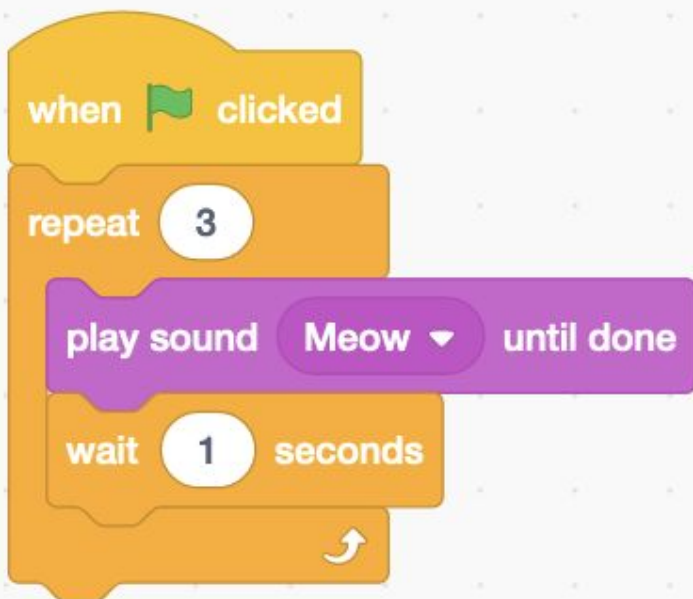
when 🚩 clicked

repeat 3

play sound Meow ▼ until done

wait 1 seconds

Inspiration Studio

https://scratch.mit.edu/studios/29734495/

Vocabulary

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Vocabulary

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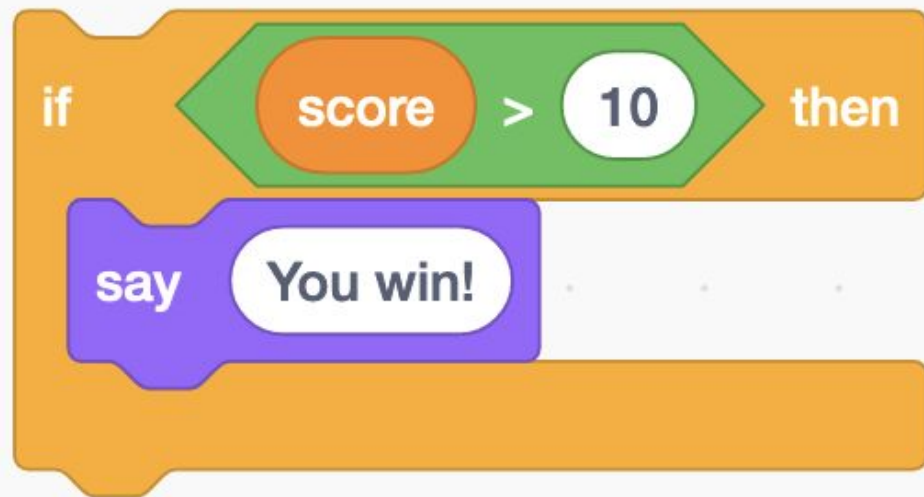Functions

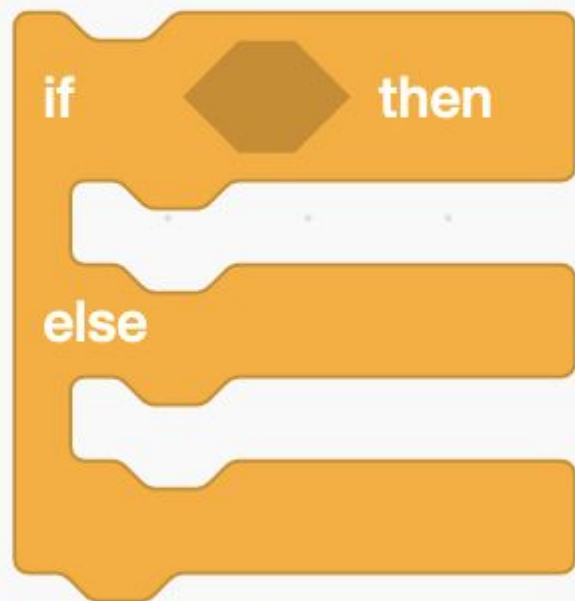Inputs ("Arguments")

Loops

Variables

Boolean Expressions

set `score ▾` to `0`

Variables and Conditionals

Add a variable to your project to change how something happens.

Inspiration Studio

https://scratch.mit.edu/studios/27321018

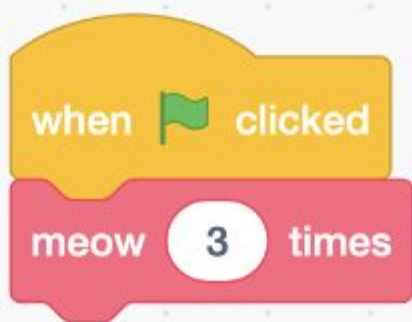# Vocabulary

Conditionals

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Functions

Create a function in your project that *abstracts away* some underlying complexity.

```
define meow ( n ) times

repeat ( n )
    play sound [ Meow ▼ ] until done
    wait ( 1 ) seconds
```

Inspiration

https://scratch.mit.edu/projects/565121265/

Problem Set 0

A Scratch project that integrates each of the features we've practiced today.

Due Sunday, 1/30, 11:59pm

Vocabulary

Conditionals

Events

Functions
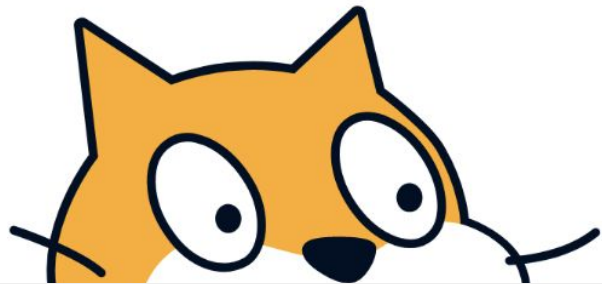
Inputs ("Arguments")

Loops

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https://cs50.ly/studybuddy

https://cs50.ly/attend

This was CS50.