



Welcome to Adventure!  
You are standing at the end of a road before a small brick building. A small stream flows out of the building and down a gully to the south. A road runs up a small hill to the west.  
> in



# YEAH Hours: Assign6

## Adventure

CS106AX Autumn 2025 🍁

*Slides based on materials by Anand Shankar, CS106AX 2019*

[cs106ax.stanford.edu](https://cs106ax.stanford.edu)

**Stanford** | ENGINEERING  
Computer Science

# Welcome to Week 7/8 of CS106AX!



Autumn



Week 7

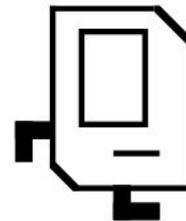


Winter

*Hope that everything's going well!*



# The Map For Today



1 Welcome back to YEAH hours!

2 Recap of: **Python classes + objects**

3 File reading / decomposition of Adventure

↪ *See Jerry's lecture for an overall assignment / milestones overview!*

4 Questions and office hours!





# Lecture Recap!

Python Classes, Object-Oriented Design



~10 minutes

*Recap and examples on the classroom whiteboard; feel free to ask any questions!*



*Jerry Picture of the Week* 💖



# **Adventure!**

My all-time favorite Stanford CS assignment!



# Adventure!

## Adventure!

You are standing at the end of a road before a small brick building. A small stream flows out of the building and down a gully to the south. A road runs up a small hill to the west.

> **WEST**

You are at the end of a road at the top of a small hill. You can see a small building in the valley to the east.

> **EAST**

Outside building.

>





# Data-Driven Programs

- ❑ Before, you built a program to do one thing, e.g. play Breakout/Wordle or reassemble text strings
- ❑ Now, your program will be *data-driven*: source of data is external to program, i.e. not part of the code



# Data-Driven Programs

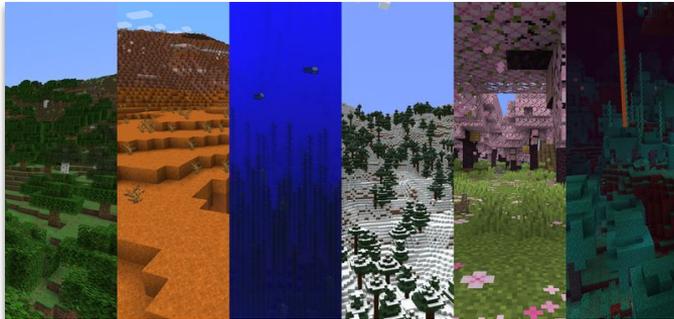
- ❑ Before, you built a program to do one thing, e.g. play Breakout/Wordle or reassemble text strings
- ❑ Now, your program will be ***data-driven***: source of data is external to program, i.e. not part of the code
- ❑ How do you do that?
  1. Build a *framework* that consumes data from external sources (text files)
  2. Convert external data into an **internal representation using data structures**
  3. Use internal representation to run the program





# Why Data-Driven Programs?

- ❑ Why is this useful?
  - ❑ Instead of just making a program that can play Wordle / Breakout, **you build a *framework* that can play any number of games**
  - ❑ You're not designing just one Adventure; you're designing a program that can play *any* adventure – **swap out the input data files** that create the fantasy world, and you have a new game!
  - ❑ Powerful!



**“I’m Going on An Adventure!”**





# Adventure Game Data Files

```
{Tiny, Small, Crowther}Rooms.txt
```

```
OutsideBuilding
Outside building
You are standing at the end of a road before a small brick
building.  A small stream flows out of the building and
down a gully to the south.  A road runs up a small hill
to the west.
```

```
-----
```

```
WEST: EndOfRoad
UP: EndOfRoad
NORTH: InsideBuilding
IN: InsideBuilding
SOUTH: Valley
DOWN: Valley
```

```
EndOfRoad
End of road
You are at the end of a road at the top of a small hill.
You can see a small building in the valley to the east.
```

```
-----
```

```
EAST: OutsideBuilding
DOWN: OutsideBuilding
```

**Name of room**  
**Short description of room**  
**Long description of room**  
(can span multiple lines)

**----- separator** denotes end of long description

**Directions and next rooms**  
(can be multiple passages)

**Blank line** denotes end of room



# Adventure Game Data Files

```
{Small,Crowther}Objects.txt
```

```
KEYS
```

```
a set of keys
```

```
InsideBuilding
```

```
LAMP
```

```
a brightly shining brass lamp
```

```
BeneathGrate
```

```
WATER
```

```
a bottle of water
```

```
PLAYER
```

**Name of object**

**Description of object**

**Initial room location of object**

**Blank line is separator between objects**

**Special case – object starts in player inventory when location is PLAYER**



# Adventure Game Data Files

```
{Small, Crowther}Synonyms.txt
```

```
N=NORTH  
S=SOUTH  
E=EAST  
W=WEST  
U=UP  
D=DOWN  
Q=QUIT  
L=LOOK  
I=INVENTORY  
CATCH=TAKE  
RELEASE=DROP  
BOTTLE=WATER
```

Each line of the form shortname=longname  
One synonym per line



# Adventure Game Starter Files



## Adventure.py

- ❑ **Runnable Python file** – entry point of your program
- ❑ Similar to **TeachingMachine.py**
- ❑ Shouldn't need to modify anything except **ADVENTURE\_PREFIX** constant, to change game mode from Tiny to Small to Crowther (full game)



## AdvGame.py

- ❑ Implements the game
- ❑ Analogous to **TMCourse.py**
- ❑ Build out the run method throughout various milestones, adding helpers when needed, with the **core task to navigate between Adventure rooms**





# Adventure Game Starter Files



## AdvRoom.py

- ❑ Represents a single room in the game
- ❑ Analogous to `TMQuestion.py`
- ❑ Contains headers needed for Milestone 1, e.g., `getName()`, `getLongDescription()`, etc., add more public headers in future milestones



## AdvObject.py

- ❑ Represents an object in the game, which can be stored in an Adventure room or the player's inventory,
- ❑ Implement provided public headers in Milestone 4, `getName()`, `getInitialLocation()`, etc.



# Questions on Teaching Machine code, etc.?



*Next Up: Adventure Design*

# Interactive examples on the classroom board!

*AdvGame, AdvRoom, AdvObject  
classes, how they support gameplay*





# Full Gameplay Solution Reference

See the website assignments tab. Warning: Spoilers!





# Full Gameplay Solution Reference

See the website assignments tab. Warning: Spoilers! 

Complete Transcript of How to Win the Colossal  
Cave Adventure Game (CS106AX)



## Welcome to Adventure!

You are standing at the end of a road before a small brick building. A small stream flows out of the building and down a gully to the south. A road runs up a small hill to the west.

> in

You are inside a building, a well house for a large spring. The exit door is to the south. There is another room to the north, but the door is barred by a shimmering curtain. There is a set of keys here.

> take keys

Taken.

> out

Outside building

> south

You are in a valley in the forest beside a stream tumbling along a rocky bed. The stream is flowing to the south.

> look

You are on the east bank of a fissure slicing clear across the hall. The mist is quite thick here.

> east

Hall of mists

> north

As you enter the chamber, you see a fierce green snake. Before you can think, the little bird flies from your shoulder, attacks the green snake, and in an astounding flurry drives the snake away. The bird then flies back.

> east

You are in the East Side Chamber of the Hall of the Mountain King.

There is a bag of coins here.

> take coins

Taken.

> look

You are in the East Side Chamber of the Hall of the Mountain King.

> west

You are in the Hall of the Mountain King, with passages off in several directions.

> north

You are in a low N/S passage with a hole in the floor.

> down

You are in an E/W passage. There is a hole in the ceiling above that appears to open into a passage.

> east

You're in a small chamber lit by an eerie green light that seems to emanate from an extremely narrow crack to the north. A dark corridor leads west.

> north

Something you're carrying won't fit through the crack.

# Keep up the amazing work! :)

Please feel free to reach out if you have any questions, e.g., in the office hours following the overview portion of the YEAH session!

