# Python

## Lists

### For loops with lists:

    cat = ['fat', 'orange', 'loud']

    for i in range(len(cat)):

        print(cat[i])

### Multiple assignment:

    cat = ['fat', 'orange', 'loud']

    size, colour, disposition = cat

### List methods

    cat.index("orange")

    cat.append("hey")

['fat', 'orange', 'loud', 'hey']

    cat.insert(1, "bird")

['fat', 'bird', 'orange', 'loud']

    cat.remove("bird")

['fat', 'orange', 'loud']

remove takes out the first found value in the list

    del cat[0]

['fat', 'orange', 'loud']

del takes out the value at that point in the list

    cat.sort()

['fat', 'loud', 'orange']

sorts the list ascending order, alphabetically or numerically

if you want opposite, reverse=true

## Dictionaries

    myCat = {"weight": 20, "colour": "orange", "disposition": "loud"}

    print(myCat['weight'])

20

    print(myCat.keys())

dict\_keys(['weight', 'colour', 'disposition'])

    print(myCat.values())

dict\_values([20, 'orange', 'loud'])

* Order doesn’t matter for dictionaries
* To check if key in dictionary:

## List Comprehension

## Lambdas

# Java

# C++

# C

# Javascript

# Database

every database has a schema, it’s either defined by the database or the application

SQL

noSQL

PostgreSQL

mongoDB

# Data Science

# Unity

SerializeField – allows you to edit variables in unity editor rather than in the C# code.

Use inputField for WASD inputs, or button press

Rigidbody: allows objects to have physical interactions

* In 2D, will cause object to fall down the scene. Turn gravity scale to 0.

Collider2D: defines the shape of the object for collisions

# Web Development

# Containers

google container orchestration

article of container runtimes:

<https://www.aquasec.com/cloud-native-academy/container-security/container-runtime/#:%7E:text=What%20Is%20a%20Container%20Runtime,on%20a%20host%20operating%20system>

another:

<https://kubernetes.io/docs/setup/production-environment/container-runtimes/>

## Docker

## Kubernetes

Kubernetes is like docker but for larger scale applications. the next step.

# AI Tools

## Github Copilot

Alt backslash -> trigger copilot explicitly

If you don’t like suggested solution, open a window with multiple solutins with ctrl + enter