CPSC 250 - Dictionaries

CS people love these!
I am a Physics person. Maybe I was just not born right. I don't tend to use them a lot.

Students hate these!!!

Important Point: Dictionaries are, sometimes, the best data structure to use to easily solve some real world problems. We should use them as appropriate.

When? ⇨ Is there a 1:1 mapping between one list of things and a second list of things? If yes, a dictionary could help.

names = ['Bob', 'Alice', 'Jane',

ages = [18, 31, 16, 47]

'Fred'

Replace with

people = {'Bob': 18, 'Alice': 31,
'Jane': 16, 'Fred': 47}

This structure preserves/stores this additional information related to the correlation between the list elements.

print(people['Bob']) FD 18

square braces

Important Jargon:

'Bob' : 18

value

key value

Both key and value can be of different types:

e.g. {'Bob': 'Alice',
'Jane': 'Heather',
'Fred': 'John'}

{1: 'Bob', 2: 'Fred', 3: 'Bill'}

print(finish_order[2])

↑ note !! not an index!!

Summary

Type	Notes	Mutable?
int	numeric, integers	Y
float	numeric, floating pt. #s	Y
String	sequence, text (list of characters)	Y

list	sequence	ordered	Y
tuple	sequence	ordered	N
Set	set	unorded, unique	Y
dict	mapping	key/value pairs	Y