computer science 101

SPRING 2022

Ingredients :

- Assignments — Blockly, Faces, Turtles, Transform, Guessword (x2!!), Recommender
- APTs x 55
- APT Quiz x 2
- Labs x12
- Pre-class Quizzes x19
- Exams x4 (+ a bonus final)
- As many WOTOs as you can get your hands on
- CS reviewer app

```
1  """
2  Created on 2022/4/7
3  @author: Janet Jiang (jcj42)
4  """
5
6  def maximumFacts(suspects):
7      lst = []
8      if len(suspects) >1:
9          for i in range(len(suspects)):
10             set1 = set(suspects[i].split(","))
11             for j in range(i+1, len(suspects)):
12                 set2 = set(suspects[j].split(","))
13                 lst.append(len(set1&set2))
14         return max(lst)
15     return 0
```

↳ positiveID.py

Instructions (for when you need help)

1. Post on ed discussion ; TA response time == very quick
2. Attend office hours
3. Do 10 semesters worth of mock exams

python tutor

```
1   def calculate(food1, food2, food3):
2       set1 = set(food1.split(" "))
3       set2 = set(food2.split(" "))
4       set3 = set(food3.split(" "))
5       set4 = set1.union(set2)
6       set5 = set3.union(set4)
7       lst = list(set1) + list(set2) + list(set3)
8       lst2 = []
9       for item in set5:
10          if lst.count(item) == 2:
11              lst2.append(item)
12      return " ".join(sorted(lst2))
13
14
15  if __name__ == '__main__':
16      food1 = "a b a c a"
17      food2 = "b a a"
18      food3 = "c c a b"
19      print(calculate(food1, food2, food3))
```

Print output (drag lower right corner to resize)

```
c
```

Frames	Objects
Global frame	function calculate(food1, food2, food3)
calculate	
food1 "a b a c a"	
food2 "b a a"	
food3 "c c a b"	

THE 7 STEPS:

1. Work on an instance
2. Write down exactly what you just did
3. Generalize your steps from (2)
4. Test your steps

1-4: Devising Algorithm →

5: Translate to code

↓

6: Test Program

algorithmic → implementation → if incorrect

7: Debug Program

jcj42 ; def func(lst1, lst2): print (lst1+lst2)   return ("sleep deprived," set(lst1 + lst2), "420+21 == 690", "Winnie the Pooh 🐻")