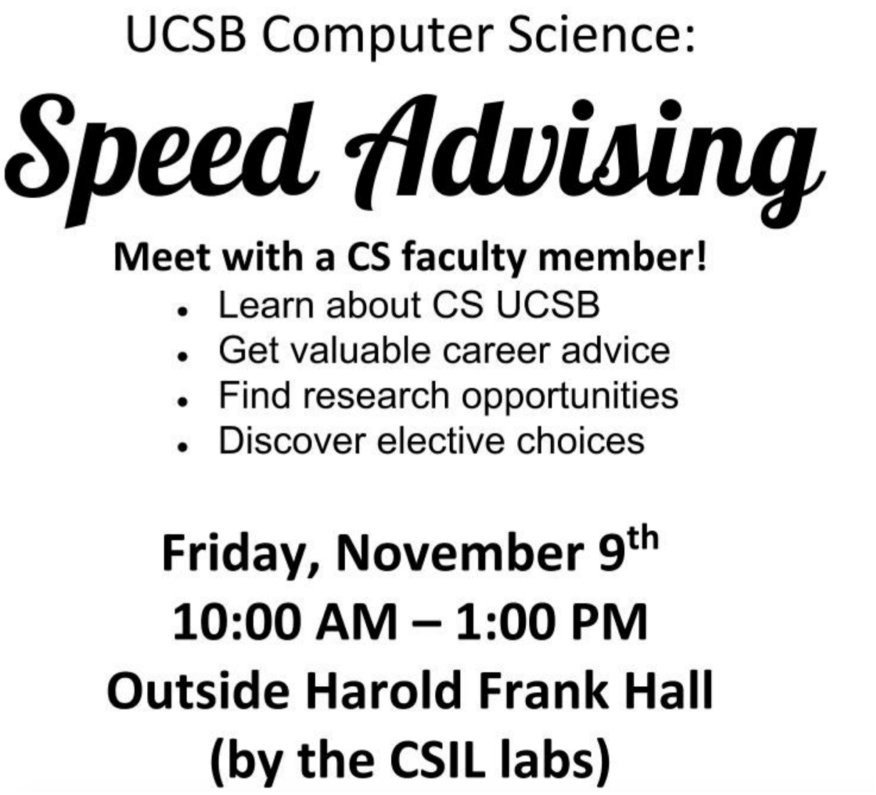
Text processing
The random module

Don’t miss these events!



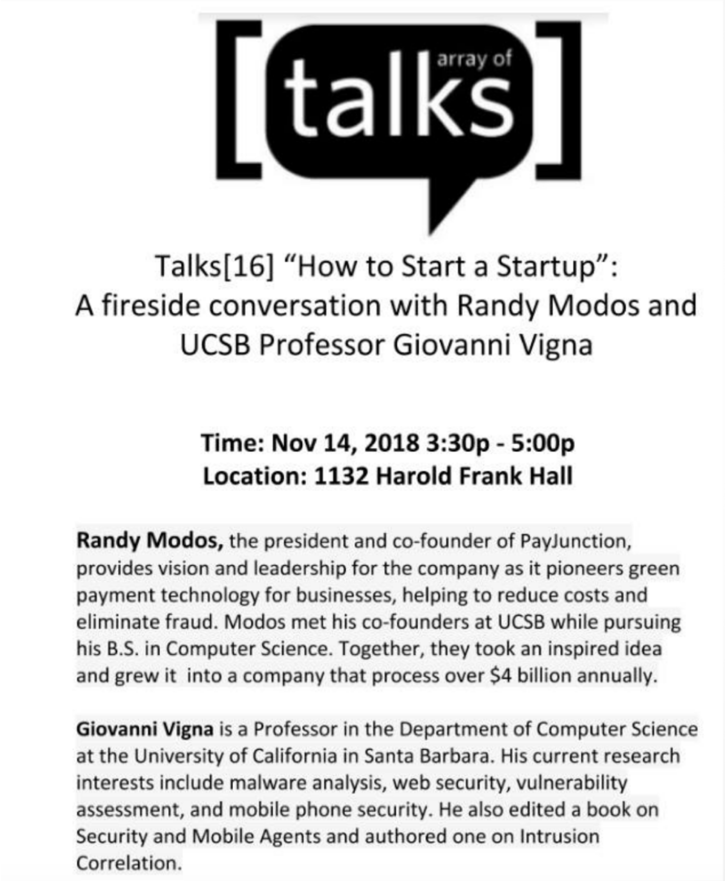
UCSB Computer Science:

Speed Advising

Meet with a CS faculty member!

- Learn about CS UCSB
- Get valuable career advice
- Find research opportunities
- Discover elective choices

Friday, November 9th
10:00 AM – 1:00 PM
Outside Harold Frank Hall
(by the CSIL labs)



array of
talks

Talks[16] “How to Start a Startup”:
A fireside conversation with Randy Modos and
UCSB Professor Giovanni Vigna

Time: Nov 14, 2018 3:30p - 5:00p
Location: 1132 Harold Frank Hall

Randy Modos, the president and co-founder of PayJunction, provides vision and leadership for the company as it pioneers green payment technology for businesses, helping to reduce costs and eliminate fraud. Modos met his co-founders at UCSB while pursuing his B.S. in Computer Science. Together, they took an inspired idea and grew it into a company that process over $4 billion annually.

Giovanni Vigna is a Professor in the Department of Computer Science at the University of California in Santa Barbara. His current research interests include malware analysis, web security, vulnerability assessment, and mobile phone security. He also edited a book on Security and Mobile Agents and authored one on Intrusion Correlation.

String Methods

```
s = "CS 8: Intro to Programming”
s.find(“8”)
s.find(“Math”)
s.startswith(“CS”)
s.startswith(”Computer”)
s.endswith(“ing”)
s.endswith(“Prog”)
s.count(‘m’)
'Mississippi'.count('i’)
s.replace(":", "#")
s.upper()
‘Mississippi’.lower()
```

Concept Question

```
MS = “Mississippi”
MS.replace(“i”, “!”)
print(MS)
```

What is printed?

A. Mississippi

B. M!ss!ss!pp!

C. Error

D. None of the above

String formatting

Let’s say you have an integer price:

```
price = 18.00
```

Write a statement to print:

```
The price is <price>. Wow that’s cheap!
```

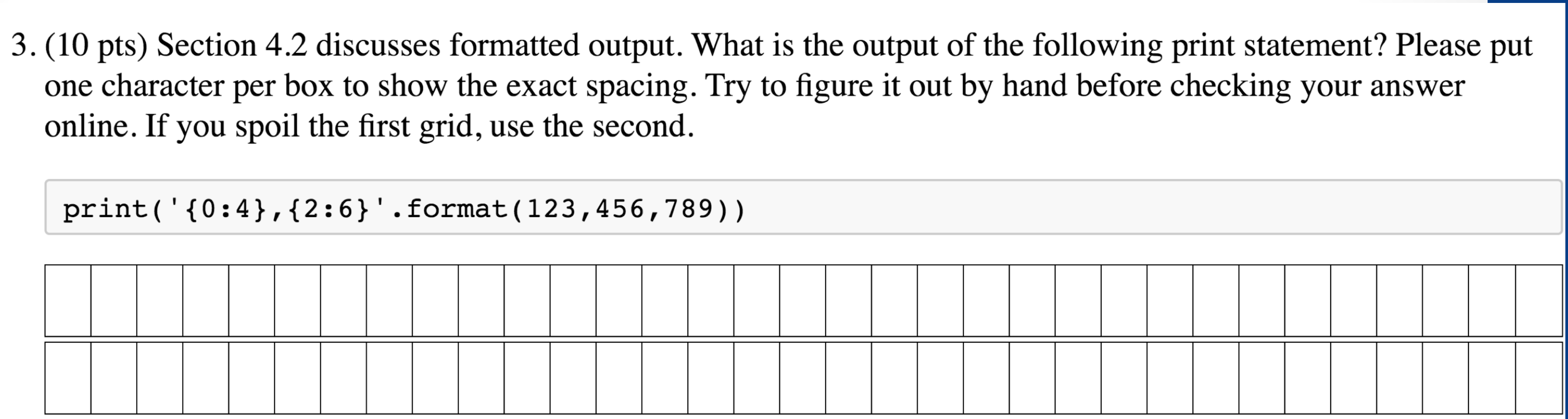
''' Format specification:

{ : }. Left side of colon say which argument to place into {}

To the right we specify a FIELD WIDTH (i.e., how many spaces/ columns on the screen to devote to this

```
print("-->{}<--".format(price))
print("-->{:20}<--".format(price))
# We can use '>' or '<' to justify left or right
print("-->{:<20}<--".format("18"))
print("-->{:>20}<--".format("18"))
# we can use '^' to center.
print("-->{:^20}<--".format("18"))
print("-->{:20.2f}<--".format(price))
# without 'f' , price appears in scientific notation
# width of 20, with 2 places after the decimal
```

HW07

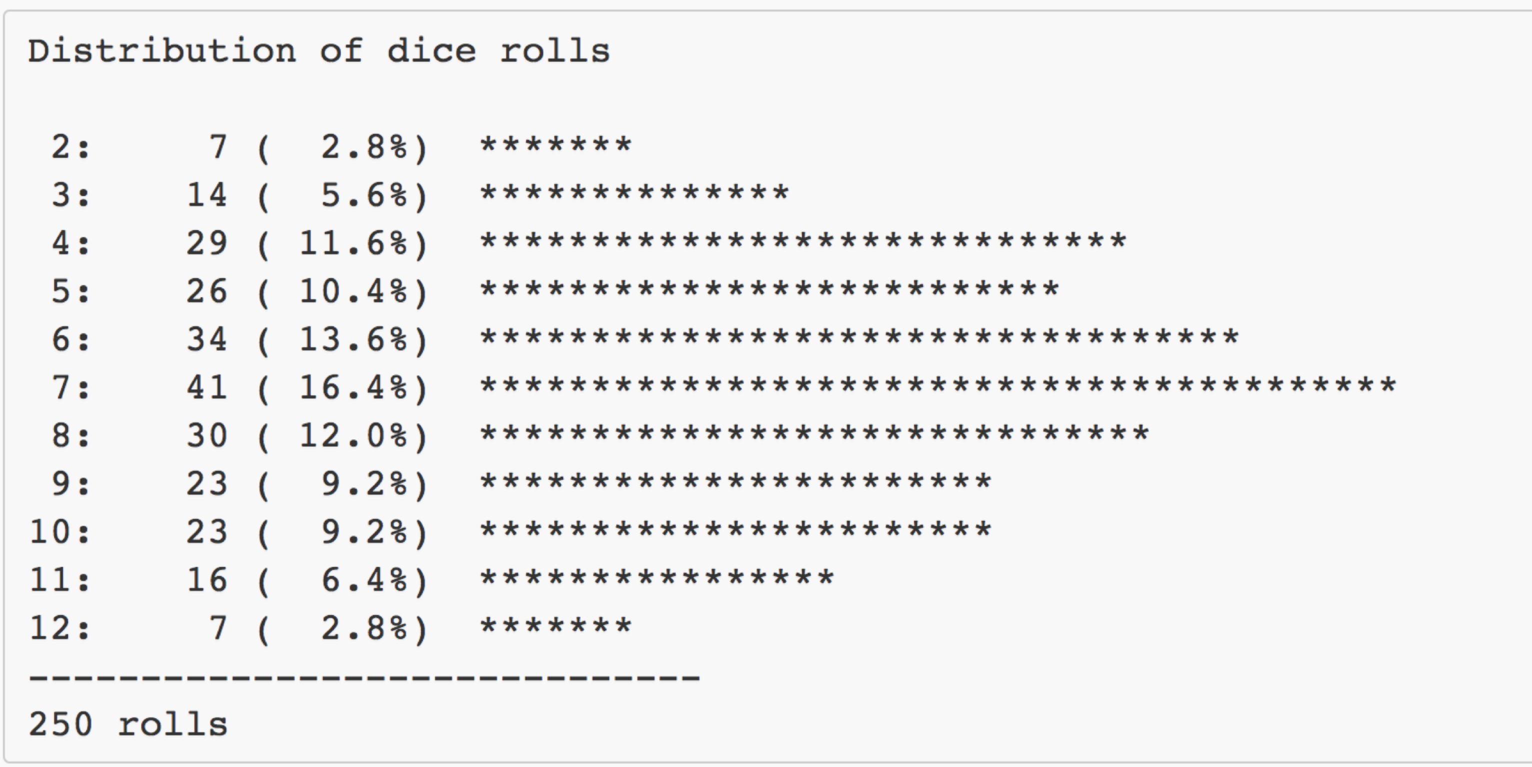


3. (10 pts) Section 4.2 discusses formatted output. What is the output of the following print statement? Please put one character per box to show the exact spacing. Try to figure it out by hand before checking your answer online. If you spoil the first grid, use the second.

```
print('{0:4},{2:6}'.format(123,456,789))
```

lab06

Your code will produce the following histogram by simulating die roll:



```
Distribution of dice rolls

 2:     7 (  2.8%)  *******
 3:    14 (  5.6%)  **************
 4:    29 ( 11.6%)  *****************************
 5:    26 ( 10.4%)  **************************
 6:    34 ( 13.6%)  **********************************
 7:    41 ( 16.4%)  *****************************************
 8:    30 ( 12.0%)  ******************************
 9:    23 (  9.2%)  ***********************
10:    23 (  9.2%)  ***********************
11:    16 (  6.4%)  ****************
12:     7 (  2.8%)  *******
------------------------------
250 rolls
```

Random numbers

```
from random import random

random()        # returns a number in the range [0,1)
randrange(x,y) # returns a random integer including x up to
                # (but not including) y.
choice(somelist) # selects an element from somelist at random
```

Generating random numbers

Write a Python statement to generates a number between 0 and 100 (include floating point values like 55.5)

Assume you have the correct import statements

A. random()+100
B. random()*100
C. random()/100

Generating random numbers

Write a Python statement to generates a INTEGER between 50 and 100. Assume you have the correct import statements

A. random()*50
B. 50+ int(random()*50)
C. randrange(50,100)
D. Both B and C
E. None of the above

Lab06 warm up

```
def rollDice():
    '''
    returns sum of rolling two six sided die'''


def rollDistribution(n):
    '''
    rolls a pair of die n times, returns the tally'''


def printDistribution(diceTally):
    '''
    prints the diceTally as a histogram'''
```

Project 01