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Unit 7 - Week 5

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

week 4

Week 5

- Introduction to Dictionaries (unit? unit=84&lesson=85)
- Speech to Text : No need to write 01 (unit? unit=84&lesson=86)

Assignment 5

The due date for submitting this assignment has passed.

Due on 2020-03-04, 23:59 IST.

Assignment submitted on 2020-03-04, 23:50 IST

1) What does the following code do?

1 point

```

1 import random
2 def get_gates():
3     r=random.randint(0,2)
4     r1=random.randint(0,2)
5     while(r==r1):
6         r=random.randint(0,2)
7     l=['x','x','x']
8     l[r]='c'
9     l[r1]='c'
10    ind=[0,1,2]
11    for each in ind:
12        if(each!=r1 and each!=r):
13            l[each]='g'
14    print(l)
15
16 get_gates()

```

- ☒ creates a list where two random elements are 'c' and the other element is 'g'
- ☐ creates a list where two random elements are 'g' and the other element is 'c'

Speech to Text
: No need to
write 02 (unit?
unit=84&lesson=87)

Speech to Text
: No need to
write 03 (unit?
unit=84&lesson=88)

Monte Hall : 3
doors and a
twist 01 (unit?
unit=84&lesson=89)

Monte Hall : 3
doors and a
twist 02 (unit?
unit=84&lesson=90)

Rock, Paper
and Scissor :
Cheating not
allowed !! 01
(unit?
unit=84&lesson=91)

Rock, Paper
and Scissor :
Cheating not
allowed !! 02
(unit?
unit=84&lesson=92)

Rock, Paper
and Scissor :
Cheating not
allowed !! 03
(unit?
unit=84&lesson=93)

Rock, Paper
and Scissor :
Cheating not
allowed !! 04
(unit?
unit=84&lesson=94)

Sorting and
Searching : 20
questions
game 01 (unit?
unit=84&lesson=95)

Sorting and
Searching : 20
questions
game 02 (unit?
unit=84&lesson=96)

Sorting and
Searching : 20
questions

- ☐ creates a list where one random elements is 'c' and the other element is 'g'
- ☐ none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:

creates a list where two random elements are 'c' and the other element is 'g'

2) Which of the random experiments from the options does the code represent?

1 point

```
1 import random
2 while (1):
3     r=random.randint(0,1)
4     if (r==0):
5         print('tossing')
6         break
7     else:
8         print('tossing')
```

- ☐ Tossing a coin once
- ☒ Tossing a coin infinite times
- ☐ Tossing a coin repeatedly till a head is encountered
- ☐ none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:

none of the above

3) Which of the random experiments from the options does the code represent?

1 point

```
1 import random
2 p1=["rock","paper","scissor"]
3 p2=["rock","paper","scissor"]
4 c1=random.choice(p1)
5 c2=random.choice(p2)
6 if (c1==c2):
7     print("SUCCESS")
8 else:
9     print("FAIL")
```

- ☐ Prints a success when both people select the same object
- ☐ Prints a success when both people select "rock"
- ☒ Prints a success when both people select different objects
- ☐ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:

Prints a success when both people select the same object

4) For the code below, which of the statement in the options is false?

1 point

game 03 (unit?
unit=84&lesson=97)

● Sorting and
Searching : 20
questions
game 04 (unit?
unit=84&lesson=98)

● Sorting and
Searching : 20
questions
game 05 (unit?
unit=84&lesson=99)

● Sorting and
Searching : 20
questions
game 06 (unit?
unit=84&lesson=100)

● Sorting and
Searching : 20
questions
game 07 (unit?
unit=84&lesson=101)

● Sorting and
Searching : 20
questions
game 08 (unit?
unit=84&lesson=102)

● Quiz :
Assignment 5
(assessment?
name=264)

○ Programming
Assignment-1:
Cab and walk
(/noc20_cs35/progassignment?
name=291)

○ Programming
Assignment-2:
End-Sort
(/noc20_cs35/progassignment?
name=292)

○ Programming
Assignment-3:
Semi Primes
(/noc20_cs35/progassignment?
name=293)

○ Week 5
Feedback
(unit?
unit=84&lesson=294)

Week 6

```
1 t=[]
2 for i in range(10):
3     a=int(input("Enter the number you want to insert in the list"))
4     if (len(t)==0):
5         t.append(a)
6     else:
7         if (a>t[len(t)-1]):
8             t.append(a)
9 print(t)
```

- ☐ The loop runs exactly 10 times
- ☐ All the integers taken as input from the user need not be in the list l
- ☒ The list l consists of exactly 10 elements at the end of the program
- ☐ The list l printed in the last line is a sorted list

Yes, the answer is correct.

Score: 1

Accepted Answers:

The list l consists of exactly 10 elements at the end of the program

5) Which of the random experiments from the options does the code represent?

1 point

```
1 import random
2 bins={}
3 for i in range(1,11):
4     bins[i]=0
5 for i in range(1,101):
6     r = random.randint(1,10)
7     bins[r]=bins[r]+1
8 print(bins)
```

- ☐ Placing 100 bins and then throwing 10 balls randomly in these bins
- ☐ Placing 10 bins and then throwing 100 balls randomly in these bins
- ☐ Placing 10 bins and 10 balls and then throwing 10 balls randomly in these bins
- ☒ None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Placing 10 bins and then throwing 100 balls randomly in these bins

6) Assuming that "bins" represents a dictionary where key is the number of a bin and value represents the number of balls present in the corresponding bin, what is the output of the following code? **1 point**

```
1 min_=0
2 min_i=-1
3 for each in bins:
4     if (bins[each]>min_):
5         min_i=each
6         min_=bins[each]
7 print(min_i)
```

- ☐ Displays the maximum number of balls present in any bin

Week 7**Week 8****Week 9****Week 10****Week 11****Week 12****Text Transcripts****Download
Videos****Books**

- ☐ Displays the number of the bin containing maximum balls
☐ Displays the number of the bin containing minimum balls
☒ None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Displays the number of the bin containing maximum balls

7) Assuming that "bins" represents a dictionary where key is the number of a bin and value represents the number of balls present in the corresponding bin, what is the output of the following code? **1 point**

```

1 def mbin():
2     max_=0
3     max_i=-1
4     for each in bins:
5         if (bins[each]>max_):
6             max_i=each
7             max_=bins[each]
8     print(max_i)
9     return max_i
10
11 while(len(bins)>0):
12     b=mbin()
13     del(bins[b])

```

- ☐ Displays the maximum number of balls present in any bin
☐ Displays bins in the ascending order of the number of balls they have
☐ Displays bins in the descending order of the number of balls they have
☒ None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Displays bins in the descending order of the number of balls they have

8)

```

1 def find(list1,num):
2     for each in list1:
3         if (each!=num):
4             print(each)
5         else:
6             break
7
8 t=[]
9 for i in range(100000):
10     t.append(i)
11
12 find(t,99999)

```

The above code generates numbers from

- ☐ 0 to 99999

1 point

- ☐ 0 to 100000
☒ 0 to 99998
☐ 1 to 99998

Yes, the answer is correct.

Score: 1

Accepted Answers:

0 to 99998

9) Which of the random experiments from the options does the code represent?

1 point

```

1 import random
2 while (1):
3     r=random.randint(1,6)
4     if (r%2==0):
5         print('rolling')
6         break
7     else:
8         print('rolling')

```

- ☐ Rolling a dice once
☐ Rolling a dice infinite times
☒ Rolling a dice repeatedly till an odd number is encountered
☐ Rolling a dice repeatedly till an even number is encountered

No, the answer is incorrect.

Score: 0

Accepted Answers:

Rolling a dice repeatedly till an even number is encountered

10) Assuming that "bins" represents a dictionary where key is the number of a bin and value represents the number of balls present in the corresponding bin, what plot does the following code generate? **1 point**

```

1 import matplotlib.pyplot as plt
2 val=bins.values()
3 x=[]
4 y=[]
5 print(val)
6 for each in list(set(val)):
7     x.append(each)
8     y.append(val.count(each))
9     print(each, val.count(each))
10 plt.plot(x,y)
11 plt.show()

```

- ☐ X axis: Number of balls, Y axis: Number of bins having as many balls as specified by X axis
☐ X axis: Bin number, Y axis: Number of balls in the bin whose number is specified by X axis
☐ X axis: Ball number, Y axis: The bin number which contained the ball whose number is specified by the X axis
☐ None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

None of the above