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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » The Joy of Computing using Python (course)

Announcements (announcements) About the Course (https://swayam.gov.in/nd1_noc20_cs35/preview)

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

Assignment 5

The due date for submitting this assignment has passed. Due on 2020-03-04, 23:59 IST. As per our records you have not submitted this assignment.

1) What does the following code do?

1 point

```
import random
2 def get_gates():
    r=random.randint(0,2)
    r1=random.randint(0,2)
    while (r==r1):
      r=random.randint(0,2)
    1 = ['x', 'x', 'x']
    1[r] = c'
    1 [ r1]= 'c'
    ind = [0, 1, 2]
10
    for each in ind:
      if (each!=r1 and each!=r):
         1 [ each ] = 'g'
    print(1)
14
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'
- creates a list where one random elements is 'c' and the other element is 'g'
- none of the above

No, the answer is incorrect. Score: 0

00010.0

Accepted Answers:

```
03 (unit?
                          creates a list where two random elements are 'c' and the other element is 'g'
  unit=84&lesson=88)
                         2) Which of the random experiments from the options does the code represent?
                                                                                                                1 point
O Monte Hall: 3
  doors and a
                                       import random
  twist 01 (unit?
                                       while (1):
  unit=84&lesson=89)
                                            r=random.randint(0,1)
O Monte Hall: 3
                                            if(r == 0):
  doors and a
                                                print('tossing')
  twist 02 (unit?
                                               break
  unit=84&lesson=90)
                                            else:
Rock, Paper
                                               print('tossing')
  and Scissor:
  Cheating not

    Tossing a coin once

  allowed !! 01

    Tossing a coin infinite times

  (unit?
  unit=84&lesson=91)
                            Tossing a coin repeatedly till a head in encountered
                            none of the above
O Rock, Paper
  and Scissor:
                          No, the answer is incorrect.
  Cheating not
                          Score: 0
  allowed !! 02
                          Accepted Answers:
  (unit?
                          none of the above
  unit=84&lesson=92)
                         3) Which of the random experiments from the options does the code represent?
                                                                                                                1 point
Rock, Paper
  and Scissor:
                                       import random
  Cheating not
  allowed !! 03
                                      2 p1=["rock", "paper", "scissor"]
  (unit?
                                      p2=["rock", "paper", "scissor"]
  unit=84&lesson=93)
                                       cl=random.choice(pl)
Rock, Paper
                                       s c2=random.choice(p2)
  and Scissor:
                                       6 if (c1==c2):
  Cheating not
                                            print("SUCCESS")
  allowed !! 04
                                       else:
  (unit?
                                            print("FAIL")
  unit=84&lesson=94)

    Sorting and

                           Prints a success when both people select the same object
  Searching: 20
  questions game
                           Prints a success when both people select "rock"
  01 (unit?
                            Prints a success when both people select different objects
  unit=84&lesson=95)
                            None of the above
Sorting and
                          No, the answer is incorrect.
  Searching: 20
                          Score: 0
  questions game
                          Accepted Answers:
  02 (unit?
                          Prints a success when both people select the same object
  unit=84&lesson=96)
                         4) For the code below, which of the statement in the options is false?
                                                                                                                1 point

    Sorting and

  Searching: 20
  questions game
  03 (unit?
                         ı t =[]
  unit=84&lesson=97)
                         2 for i in range(10):
                              a=int(input("Enter the number you want to insert in the list"))

    Sorting and

                              if(len(t) == 0):
  Searching: 20
                                t.append(a)
  questions game
                              else:
  04 (unit?
                                 if (a>t [len (t)-1]):
  unit=84&lesson=98)
                                   t.append(a)
Sorting and
                           print(t)
  Searching: 20
```

```
questions game
                             The loop runs exactly 10 times
   05 (unit?
                             All the integers taken as input from the user need not be in the list I
   unit=84&lesson=99)
                              The list I consists of exactly 10 elements at the end of the program

    Sorting and

                              The list I printed in the last line is a sorted list
   Searching: 20
   questions game
                            No. the answer is incorrect.
   06 (unit?
                            Score: 0
   unit=84&lesson=100)
                            Accepted Answers:
                            The list I consists of exactly 10 elements at the end of the program

    Sorting and

   Searching: 20
                                                                                                                     1 point
                           5) Which of the random experiments from the options does the code represent?
   questions game
   07 (unit?
                                         import random
   unit=84&lesson=101)
                                        2 bins = { }

    Sorting and

                                         s for i in range (1,11):
   Searching: 20
                                              bins[i]=0
   questions game
                                           for i in range(1,101):
   08 (unit?
   unit=84&lesson=102)
                                              r = random.randint(1,10)
                                              bins[r] = bins[r] + 1
O Quiz:
                                        s print(bins)
   Assignment 5
   (assessment?
   name=264)
                             Placing 100 bins and then throwing 10 balls randomly in these bins
                             Placing 10 bins and then throwing 100 balls randomly in these bins

    Programming

   Assignment-1:
                              Placing 10 bins and 10 balls and then throwing 10 balls randomly in these bins
   Cab and walk
                              None of the above
   (/noc20 cs35/progassignment?
   name=291)
                            No, the answer is incorrect.
                            Score: 0
 Programming
                            Accepted Answers:
   Assignment-2:
                            Placing 10 bins and then throwing 100 balls randomly in these bins
   End-Sort
   (/noc20_cs35/progassignmentAssuming that "bins" represents a dictionary where key is the number of a bin and value
                                                                                                                     1 point
   name=292)
                         represents the number of balls present in the
                                corresponding bin, what is the output of the following code?
 Programming
   Assignment-3:
   Semi Primes
                                         min_=0
   (/noc20 cs35/progassignment?
                                         2 min_i=-1
   name=293)
                                           for each in bins:
 ○ Week 5
                                               if (bins [each]>min ):
   Feedback (unit?
                                                  min i=each
   unit=84&lesson=294)
                                                  min_=bins[each]
                                         print(min_i)
Week 6
                             Displays the maximum number of balls present in any bin
Week 7
                              Displays the number of the bin containing maximum balls
                              Displays the number of the bin containing minimum balls
Week 8
                              None of the above
Week 9
                            No. the answer is incorrect.
                            Score: 0
Week 10
                            Accepted Answers:
                            Displays the number of the bin containing maximum balls
Week 11
                           7) Assuming that "bins" represents a dictionary where key is the number of a bin and value
                                                                                                                     1 point
                          represents the number of balls present in the
Week 12
                                corresponding bin, what is the output of the following code?
```

def mbin():

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```
max_=0
                 max_i=-1
                 for each in bins:
                    if (bins [each]>max_):
                       max_i=each
                      max_=bins[each]
                 print(max_i)
                 return max_i
            while (len(bins)>0):
                 b=mbin()
            12
                 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 point
            def find (list1, num):
                for each in list1:
                   if (each!=num):
                      print (each)
                   else:
                      break
            s t =[]
            9 for i in range(100000):
                t.append(i)
           12 find (t,99999)
    The above code generates numbers from
  0 to 99999
  0 to 100000
  0 to 99998
  1 to 99998
 No, the answer is incorrect.
 Score: 0
Accepted Answers:
0 to 99998
9) Which of the random experiments from the options does the code represent?
                                                                               1 point
```

```
import random
               while (1):
                  r=random.randint(1,6)
                  if (r\%2==0):
                     print('rolling')
                     break
                  else:
                     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
                                                                                   1 point
represents the number of balls present in the
     corresponding bin, what plot does the following code generate?
              import matplotlib.pyplot as plt
              val=bins.values()
              3 X = []
              4 y = []
              s print(val)
              6 for each in list(set(val)):
                   x.append(each)
                   y.append(val.count(each))
                   print(each, val.count(each))
             plt.plot(x,y)
             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
```