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Unit 6 - week 4

Assignment 4

The due date for submitting this assignment has passed.

Due on 2020-02-26, 23:59 IST.

Assignment submitted on 2020-02-26, 22:49 IST

1) What does the check_magic() function in the following code do ***1 point***

```
def check_magic():
    num=[1,2,3,4,5,6,7,8,9]
    a00=0
    a01=0
    a10=0
    a11=0
    for i in range(0,9):
        for j in range(0,9):
            for k in range(0,9):
                for l in range(0,9):
                    a00=num[i]
                    a01=num[j]
                    a10=num[k]
                    a11=num[l]
                    l=[a00,a01,a10,a11]

                    print a00,'\t',a01,'\n',a10,'\t',a11
                    print '\n'
```

- displays all 2 × 2 matrices where elements are from 1 to 9.
- displays all 2 × 2 matrices where elements are from 1 to 9 but no element is repeated
- displays magic squares of size 2
- none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
displays all 2 × 2 matrices where elements are from 1 to 9.

2) What does the following code do? ***1 point***

```
l1 = ["apple", "banana" , "kiwi" , "orange"]
l2 = ["watermelon", "melon", "kiwi", "banana"]
cmn=[]
for i in range(4):
    if(l1[i]==l2[i]):
        cmn.append(l1[i])
print(cmn)
```

- displays common fruits in both the lists l1 and l2
- displays fruits which are in l1 but not in l2
- displays fruits which are in l2 but not in l1
- none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
none of the above

3) Leap years are the years ***1 point***

1. which divisible by 4 but not divisible by 100, and, those
2. divisible by 400

Which of the following code does not represent a code displaying all the leap years from 1 to 2000.

```
d4=[]
d100=[]
d400=[]
for i in range(1,2001):
    if(i%4==0):
        d4.append(i)
    if(i%100==0):
        d100.append(i)
    if(i%400==0):
        d400.append(i)
ly=[]
for each in d4:
    if each not in d100:
        ly.append(each)
for each in d400:
    ly.append(each)
print(ly)
```

```
ly=[]
for i in range(1,2001):
    if(i%4==0):
        if(i%100!=0):
            ly.append(i)
        else:
            if(i%400==0):
                ly.append(i)
print(ly)
```

```
ly =[]
for i in range(1,2001):
  if(i%400==0):
    ly.append(i)
  else:
    if(i%4==0):
      ly.append(i)
print(ly)
```

```
ly =[]
for i in range(1,2001):
  if(i%400==0 or (i%100!=0 and i%4==0)):
    ly.append(i)
print(ly)
```

No, the answer is incorrect.
Score: 0

Accepted Answers:

```
ly =[]
for i in range(1,2001):
  if(i%400==0):
    ly.append(i)
  else:
    if(i%4==0):
      ly.append(i)
print(ly)
```

4) What does the following function do **1 point**

```
def leap(year):
  if(year%400==0 or (year%100!=0 and year%4==0)):
    return 1
  else:
    return 0
```

- returns true for century year and false for non century year
- returns true for leap year and false for non leap year
- returns false for century year and true for non century year
- none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
returns true for leap year and false for non leap year

5) Which of the following code correctly represents how one can display the number of dashes equal to that of the letters in the movie name? ***1 point***

```
movies =["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
        ch =random.choice(movies)
        for i in range(len(ch)):
            print('_'),
```

```
movies =["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
        ch =random.choice(movies)
        for i in range (100):
            print('_'),
```

```
movies =["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
        ch =random.choice(movies)
        for ch in range(len(ch)):
            print('_'),
```

none of these

No, the answer is incorrect.
Score: 0
Accepted Answers:

```
movies =["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
        ch =random.choice(movies)
        for i in range(len(ch)):
            print('_'),
```

6) Given a list of movies, which of the following represents a code which randonly chooses a movie amongst all? ***1 point***

```
movies =["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
        ch = movies[random.randint(0,len(movies))]
```

```
movies =["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
        ch = movies[random.uniform(0,len(movies))]
```

```
movies =["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
        ch = movies[random.choice(0,len(movies))]
```

none of these

No, the answer is incorrect.
Score: 0
Accepted Answers:
none of these

7) What does the following code do? ***1 point***

```
s1=input("Enter a string")
s2=input("Enter another string")
for each in list(s2):
  for each2 in list(s1):
    if(each==each2):
      print("yes")
      break
```

- prints yes if both strings are same
- prints yes if both strings have atleast one common character
- prints yes if first string is contained in the second
- none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
prints yes if both strings have atleast one common character

8) Which numbers from 1 to 100 does the following code print? ***1 point***

```
for i in range(1001):
  f=0
  for j in range(2,i):
    if(i%j==0):
      f=1
      break
  if(f==0):
    print(i)
```

- prime numbers
- perfect squares
- numbers which are factorial of some other number
- perfect cubes

Yes, the answer is correct.
Score: 1

Accepted Answers:
prime numbers

9) Which numbers from 1 to 100 does the following code print? ***1 point***

```
for i in range(1001):
    f=0
    for j in range(2,i):
        if(j*j==i):
            f=1
            break
    if(f==1):
        print(i)
```

- prime numbers
- perfect squares
- numbers which are factorial of some other number
- perfect cubes

Yes, the answer is correct.
Score: 1

Accepted Answers:
perfect squares

10) Assume a drunkard whose movement is defined on the number line, i.e. he can either move forward or backward. Assume he is standing at a position *p*. He takes 2 steps forward followed by 4 steps backward. He falls into the pit as soon as he steps on the position zero. Which of the following codes correctly represents his walk? A. ***1 point***

```
p= i n t ( i n p u t ( ) )
while (p >0):
    p=p+2
     p r i n t ( " Location =" , p )
    p=p−4
     p r i n t ( " Location =" , p )
p r i n t (" Fell in p i t at location " , p )
```

```
p= i n t ( i n p u t ( ) )
while (p >0):
    p=p−2
     p r i n t ( " Location =" , p )
    p=p+4
     p r i n t ( " Location =" , p )
p r i n t (" Fell in p i t at location " , p )
```

```
p= i n t ( i n p u t ( ) )
while (p >0):
    for i in range ( 2 ) :
        p=p+1
         p r i n t ( " Loc = " , p )
         i f ( p ==0):
                break
```

```
        for i in range ( 4 ) :
                p=p−1
                p r i n t ( " Loc = " , p )
                i f ( p ==0):
                        break
p r i n t (" Fell in p i t at location " , p )
```

- none of these

No, the answer is incorrect.
Score: 0

Accepted Answers:

```
p= i n t ( i n p u t ( ) )
while (p >0):
        for i in range ( 2 ) :
                p=p+1
                p r i n t ( " Loc = " , p )
                i f ( p ==0):
                        break
        for i in range ( 4 ) :
                p=p−1
                p r i n t ( " Loc = " , p )
                i f ( p ==0):
                        break
p r i n t (" Fell in p i t at location " , p )
```