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## Unit 6 - week 4

### Course outline

#### How does an NPTEL online course work?

#### Week 0

#### Week 1

#### Week 2

#### Week 3

#### week 4

- Practice is the key (unit? unit=59&lesson=60)
- Magic Square: Hit and Trial 01 (unit? unit=59&lesson=61)
- Magic Square: Hit and Trial 02 (unit? unit=59&lesson=62)
- Magic Square: Hit and Trial 03 (unit? unit=59&lesson=63)

## Assignment 4

The due date for submitting this assignment has passed. **Due on 2020-02-26, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) What does the check\_magic() function in the following code do

1 point

```

1  def check_magic():
2      num=[1,2,3,4,5,6,7,8,9]
3      a00=0
4      a01=0
5      a10=0
6      a11=0
7      for i in range(0,9):
8          for j in range(0,9):
9              for k in range(0,9):
10                 for l in range(0,9):
11                     a00=num[i]
12                     a01=num[j]
13                     a10=num[k]
14                     a11=num[l]
15                     l=[a00, a01, a10, a11]
16
17                 print a00, '\t', a01, '\n', a10, '\t', a11
18                 print '\n'

```

- displays all  $2 \times 2$  matrices where elements are from 1 to 9.
- displays all  $2 \times 2$  matrices where elements are from 1 to 9 but no element is repeated

- Magic Square: Hit and Trial 04 (unit? unit=59&lesson=64)
- Magic Square: Hit and Trial 05 (unit? unit=59&lesson=65)
- Let's program and play (unit? unit=59&lesson=66)
- Dobble Game - Spot the similarity 01 (unit? unit=59&lesson=67)
- Dobble Game - Spot the similarity 02 (unit? unit=59&lesson=68)
- Dobble Game - Spot the similarity 03 (unit? unit=59&lesson=69)
- Dobble Game - Spot the similarity 04 (unit? unit=59&lesson=70)
- What is your date of birth? (unit? unit=59&lesson=71)
- Birthday Paradox - Find your twin 01 (unit? unit=59&lesson=72)
- Birthday Paradox - Find your twin 02 (unit? unit=59&lesson=73)
- Birthday Paradox - Find your twin 03 (unit? unit=59&lesson=74)
- Birthday Paradox - Find your twin 04 (unit? unit=59&lesson=75)

- 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**

```

1 l1 = ["apple", "banana", "kiwi", "orange"]
2 l2 = ["watermelon", "melon", "kiwi", "banana"]
3 cmn=[]
4 for i in range(4):
5     if (l1[i]==l2[i]):
6         cmn.append(l1[i])
7 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.

- ```

1 d4=[]
2 d100=[]
3 d400=[]
4 for i in range(1,2001):
5     if (i%4==0):
6         d4.append(i)
7     if (i%100==0):
8         d100.append(i)
9     if (i%400==0):
10        d400.append(i)
11 ly=[]
12 for each in d4:
13     if each not in d100:
14         ly.append(each)
15 for each in d400:
16     ly.append(each)
17 print (ly)

```

Birthday Paradox - Find your twin 05 (unit? unit=59&lesson=76)

What's your favourite movie? (unit? unit=59&lesson=77)

Guess the Movie Name 01 (unit? unit=59&lesson=78)

Guess the Movie Name 02 (unit? unit=59&lesson=79)

Guess the Movie Name 03 (unit? unit=59&lesson=80)

Guess the Movie Name 04 (unit? unit=59&lesson=81)

Guess the Movie Name 05 (unit? unit=59&lesson=82)

Guess the Movie Name 06 (unit? unit=59&lesson=83)

**Quiz :**  
**Assignment 4**  
**(assessment?**  
**name=263)**

Programming Assignment-1: Digits (/noc20\_cs35/progassignment?name=280)

Programming Assignment-2: Factorial (/noc20\_cs35/progassignment?...name=281)

Programming Assignment-3: Matrix (/noc20\_cs35/progassignment?name=282)

Week 4 Feedback (unit? unit=59&lesson=283)

```

1 ly=[]
2 for i in range(1,2001):
3     if (i%4==0):
4         if (i%100!=0):
5             ly.append(i)
6         else:
7             if (i%400==0):
8                 ly.append(i)
9 print(ly)

```

```

1 ly=[]
2 for i in range(1,2001):
3     if (i%400==0):
4         ly.append(i)
5     else:
6         if (i%4==0):
7             ly.append(i)
8 print(ly)

```

```

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

```

No, the answer is incorrect.

Score: 0

Accepted Answers:

```

1 ly=[]
2 for i in range(1,2001):
3     if (i%400==0):
4         ly.append(i)
5     else:
6         if (i%4==0):
7             ly.append(i)
8 print(ly)

```

4) What does the following function do

**1 point**

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

Text Transcripts

Download Videos

Books

```

1 def leap(year):
2     if(year%400==0 or (year%100!=0 and year%4==0)):
3         return 1
4     else:
5         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

No, the answer is incorrect.

Score: 0

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","jungle
book","matrix"]
ch=random.choice(movies)
for i in range(len(ch)):
    print('_'),

```

```

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

```

```

movies=["titanic","chinatown","avengers","3idiots","conjuring","jungle
book","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","junglebo
ok","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 randomly chooses a movie amongst all? **1 point**

```

movies=["titanic","chinatown","avengers","3idiots","conjuring","jungle
book","matrix"]

```

```
ch = movies[random.randint(0, len(movies))]
```



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



```
movies=["titanic", "chinatown", "avengers", "3idiots", "conjuring", "jungle
book", "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**

```
1 s1=input("Enter a string")
2 s2=input("Enter another string")
3 for each in list(s2):
4     for each2 in list(s1):
5         if (each==each2):
6             print("yes")
7             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

No, the answer is incorrect.

Score: 0

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**

```
1 for i in range(1001):
2     f=0
3     for j in range(2, i):
4         if (i%j==0):
5             f=1
6             break
7     if (f==0):
8         print(i)
```



prime numbers



perfect squares



numbers which are factorial of some other number



perfect cubes

No, the answer is incorrect.

Score: 0

Accepted Answers:  
*prime numbers*

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

**1 point**

```

1 for i in range(1001):
2     f=0
3     for j in range(2,i):
4         if(j*j==i):
5             f=1
6             break
7     if(f==1):
8         print(i)

```

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

No, the answer is incorrect.

Score: 0

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= int(input())
while (p >0):
    p=p+2
    print(" Location =", p)
    p=p-4
    print(" Location =", p)
print(" Fell in pit at location ", p)

```

```

p= int(input())
while (p >0):
    p=p-2
    print(" Location =", p)
    p=p+4
    print(" Location =", p)
print(" Fell in pit at location ", p)

```

```

p= int(input())
while (p >0):
    for i in range (2) :
        p=p+1
        print(" Loc = ", p)

```

```

    if ( p ==0):
        break
for i in range ( 4 ):
    p=p-1
    print ( " Loc = " , p )
    if ( p ==0):
        break
print (" Fell in pit at location " , p )

```

none of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

```

p= int(input())
while (p >0):
    for i in range ( 2 ):
        p=p+1
        print ( " Loc = " , p )
        if ( p ==0):
            break
    for i in range ( 4 ):
        p=p-1
        print ( " Loc = " , p )
        if ( p ==0):
            break
print (" Fell in pit at location " , p )

```