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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)** [Ask a Question \(forum\)](#)[Progress \(student/home\)](#) [Mentor \(student/mentor\)](#)

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)

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

● Magic Square:
Hit and Trial
03 (unit?
unit=59&lesson=63)

○ 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

```

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 2×2 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

```

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

(unit?
unit=59&lesson=74)

● Birthday
Paradox - Find
your twin 04
(unit?
unit=59&lesson=75)

● 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

Accepted Answers:

none of the above

3) Leap years are the years

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)

```

☒

```

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 point

(/noc20_cs35/progassignment?
name=281)

☒ Programming
Assignment-3:
Matrix
(/noc20_cs35/progassignment
name=282)

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

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

Text Transcripts

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Videos**

Books

```
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

```
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

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 randomly 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

```
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

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

```
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

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

```

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

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=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 p i t 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 p i t at location " , p )

```