X

Week 1 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-02-08, 23:59 IST.

Assignment submitted on 2023-01-25, 12:09 IST

1) Which of the following is/are control commands in Scratch? ***1 point***

- [x] repeat
- [x] repeat until
- [x] forever
- [ ] forever until

Yes, the answer is correct.
Score: 1

Accepted Answers:
repeat
repeat until
forever

2) Which option in scratch is used to wait between the commands: ***1 point***

- ( ) Event
- ( ) Sensing
- (•) Control
- ( ) Operators

Yes, the answer is correct.
Score: 1

Accepted Answers:
Control

3) _____ command is used to make the sprite walk by certain steps. ***1 point***

- Hide
- Delete
- Move
- Walk

Yes, the answer is correct.
Score: 1
Accepted Answers:
Move

4) The command used to make the sprite disappear from the animation stage is _____. ***1 point***

- Show
- Hide
- Delete
- move

Yes, the answer is correct.
Score: 1
Accepted Answers:
Hide

5) What is the extension of a scratch file? ***1 point***

- py
- Se
- Sb
- sc

Yes, the answer is correct.
Score: 1
Accepted Answers:
Sb

6) Predict the output of the following: ***1 point***

- 0
- 100
- 20

- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
None of the above

7) Which of the following is a facility provided by scratch to use sound effects? ***1 point***

- A sound library is provided
- Sound can be recorded using a microphone
- We can use sound file
- None of the above
- All of the above are correct (except 4).

Yes, the answer is correct.
Score: 1
Accepted Answers:
All of the above are correct (except 4).

8) In addition to an option of using the inbuilt sprite library in scratch, what are the other ways to use a sprite? ***1 point***

- We can paint a custom sprite
- We can use the camera to take pictures
- We can upload an image from our computer
- All of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
All of the above

9) _____ scratch constructs are used to keep doing a set of instructions infinitely? ***1 point***

- ever
- forever
- never
- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
forever

10) Which of the following commands would make the sprite move backward? ***1 point***

- Move 10 steps
- Move -10 steps
- Both 1 and 2
- Neither 1 and 2

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Yes, the answer is correct.
Score: 1

Accepted Answers:
Move -10 steps

X

Week 2 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-02-08, 23:59 IST.

Assignment submitted on 2023-01-28, 09:16 IST

1) What are the applications of Python? ***1 point***

- Image processing and graphic design applications
- Enterprise and business applications development
- Operating systems
- All of the above
- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
All of the above

2) Which of the following is not the correct variable name ***1 point***

- Abc
- Abd23
- 32asd
- Ab_cd_23

Yes, the answer is correct.
Score: 1
Accepted Answers:
32asd

3) Write the output of the following code. ***1 point***

```
L = [1,2,3,4,5,6,7,8,9]

print(L[::-1])
```

- [1,2,3,4,5,6,7,8,9]
- [1,2,3,4,5,9,8,7,6]
- [9,8,7,6,5,4,3,2,1]
- Error

Yes, the answer is correct.
Score: 1

Accepted Answers:
[9,8,7,6,5,4,3,2,1]

4) Predict the output of the following code: ***1 point***

```
L = [[1,2,3],[0,4,5],[0,0,6]]

for i in range (3):
    for j in range(2,i-1,-1):
        print(L[i][j], end = "")
```

- 3,2,1,5,4,6
- 3 2 1 5 4 6
- 0,0,0,0,0,0
- 0 0 0 0 0 0

Yes, the answer is correct.
Score: 1

Accepted Answers:
3 2 1 5 4 6

5) Find all the error(s)in the following code: ***1 point***

```
n = 10
l = []
for i in range(10,n+10):
l.append(i**i)

for i in range (10,0,-1):
print(l[i])
```

- [x] Index out of range
- [x] Syntax error
- [ ] Variable not defined

'int' object does not support item assignment

Yes, the answer is correct.
Score: 1

Accepted Answers:
Index out of range
Syntax error

6) What is the output of the following code: ***1 point***

```
def add_items(x,y):
    x+= [1,2]
    y+= (3,4)
l = [0]
t = (5,)
add_items(l, t)
print(l,end="")
print(t)
```

- [0,1,2] (5,3,4)
- [0,1,2] (5,)
- [0] (5,3,4)
- [0] (5,)

Yes, the answer is correct.
Score: 1

Accepted Answers:
[0,1,2] (5,)

7) What is the correct syntax for defining a function in Python? ***0 points***

- def function name():
- function function_name():
- function_name():
- def function_name:

No, the answer is incorrect.
Score: 0

Accepted Answers:
def function_name:

8) What is the purpose of the continue statement in a for loop? ***1 point***

- To skip the rest of the current iteration and move on to the next one
- To terminate the loop and exit the loop block
- To return to the top of the loop and start a new iteration
- To skip the current iteration and move on to the next one, but only if a certain condition is met

No, the answer is incorrect.

Score: 0
Accepted Answers:
To skip the rest of the current iteration and move on to the next one

9) How do you check if a number is even in Python? ***1 point***

- if number % 2 == 0
- if number.is_even()
- if number % 2 is 0
- if number.even()

Yes, the answer is correct.
Score: 1
Accepted Answers:
if number % 2 == 0

10) What should be the value of _ to print all numbers from 0-10? ***1 point***

```
for i in range( _ ):
    print(i)
```

- 11
- 9
- 10
- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
11

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Week 3 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-02-15, 23:59 IST.

Assignment submitted on 2023-02-04, 16:26 IST

1) _____ is the method to insert an item into a specified position in a list. ***1 point***

- Push
- Write
- Insert
- All of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
Insert

2) Which method returns the number of occurrences of an element in a list. ***1 point***

- Number of
- Total
- Count
- Length

Yes, the answer is correct.
Score: 1

Accepted Answers:
Count

3) The function random.randint(1,100) in python generates. ***1 point***

- (●) A random integer between 1 to 100 with 1 and 100 both inclusive
- ( ) A random integer between 1 to 100 with 1 and 100 both exclusive
- ( ) A random integer between 1 to 100 with only 100 inclusive
- ( ) None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
A random integer between 1 to 100 with 1 and 100 both inclusive

4) The method open("file1.txt", r+) opens the file file1.txt in _____. ***1 point***

- ( ) Read only mode
- ( ) Write only mode
- (●) Read Write mode
- ( ) None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
Read Write mode

5) Consider the list L= [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]. What will be the output of the statement L [3:6]? ***1 point***

- (●) [2, 3, 5]
- ( ) [0, 1, 1]
- ( ) [1, 2, 3]
- ( ) none

Yes, the answer is correct.
Score: 1

Accepted Answers:
[2, 3, 5]

6) What is the output of this code? ***1 point***

```
a,b=1,0
a=a^b
b=a^b
a=a^b
print(a)
```

- (●) 0
- ( ) 1
- ( ) 2
- ( ) This code will raise a runtime error

Yes, the answer is correct.
Score: 1

Accepted Answers:
0

7) What is the output of the following code?

```
def foo(l):
    a = l[0]
    for i in l:
        if i < a:
            a = i
    return a

print(foo([2, 3, 5, 1, 7, 6]))
```

1

Yes, the answer is correct.
Score: 1

Accepted Answers:
(Type: Numeric) 1

1 point

8) What is the output of the following code? ***1 point***

```
def bar(string):
    left = 0
    right = len(string) - 1
    while(left < right):
            if(string[left] != string[right]):
                    return False
            left += 1
            right -= 1
    return True

print(bar("telugu"))
print(bar("malayalam"))
```

- False True
- True False
- True True
- False False

Yes, the answer is correct.
Score: 1

Accepted Answers:
False True

9) Explain what the output will be when the code given below is executed. ***1 point***

```
def func(list1):
  while (len(list1) > 2):
    k=list1[0]
    for i in list1:
      if k<i:
        k=i
    list1.remove(k)

    j=list1[0]
    for i in list1:
      if j>i:
        j=i
    list1.remove(j)
  return list1

list2=func([1,4,3,6,5,3,7,8,9,4])
#sum is a function which returns the sum of all of the values of all
the elements of a list
print(sum(list2)/len(list2))
```

- The program throws an error
- 5
- 5.5
- 4.5

Yes, the answer is correct.
Score: 1

Accepted Answers:
4.5

10) Which among the following statements is True with respect to the code given below? ***1 point***

```
1  count = 0
2  for i in range(10):
3      for j in range(5):
4          count += i *j
5  print(count)
```

- count=50
- The following code throws up an error.
- count=550
- count=450

Yes, the answer is correct.
Score: 1

Accepted Answers:
count=450

Problem Solving Session ()

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Week 4: Assignment 4

The due date for submitting this assignment has passed.

Due on 2023-02-22, 23:59 IST.

Assignment submitted on 2023-02-11, 19:07 IST

1) Which of the following statements are true with regards to magic square? ***1 point***

- [x] The sum of each row should be m.
- [x] The sum of each column should be m.
- [x] The sum of each diagonal should be m.
- [ ] None of the above.

Yes, the answer is correct.
Score: 1

Accepted Answers:
The sum of each row should be m.
The sum of each column should be m.
The sum of each diagonal should be m.

2) Which of the following statements hold true about N in the magic square? N denotes the number of rows and columns in the square. ***1 point***

- ( ) N should be even.
- (•) N should be odd.
- ( ) N can be even or odd.
- ( ) N can take any value.

Yes, the answer is correct.
Score: 1

Accepted Answers:
N should be odd.

3) Which of the following statements are true regarding the Magic Squares? (N = Number of rows or columns) ***1 point***

- [x] A Magic Square is always a square matrix.
- [ ] A Magic Square can or cannot be a square matrix.
- [ ] The Sum of each row and each column is N(N+1)/2
- [x] The Sum of each row and each column is $N(N^2+1)/2$.

Yes, the answer is correct.
Score: 1
Accepted Answers:
A Magic Square is always a square matrix.
The Sum of each row and each column is $N(N^2+1)/2$.

4) What will be the output of the following code? ***1 point***

```
1  '''
2  This is a sentence
3  '''
```

- ( ) This is a sentence.
- ( ) Error
- (•) No output
- ( ) The program will not run.

Yes, the answer is correct.
Score: 1
Accepted Answers:
No output

5) Which of the following operator is used to raise the exponent to a number? ***1 point***

- ( ) ^
- ( ) *
- (•) **
- ( ) ***

Yes, the answer is correct.
Score: 1
Accepted Answers:
**

6) Suppose there is a movie with 3 letters, how many combinations of names are possible? ***1 point***

- ( ) 26
- ( ) 676
- (•) 17576
- ( ) 456976

Yes, the answer is correct.

Score: 1

Accepted Answers:
17576

7) What should be the value of a, b, c, d respectively? ***1 point***

6	a	8
b	5	c
2	d	4

- 1,3,9,7
- 9,3,7,1
- 1,7,3,9
- 7,3,9,1

Yes, the answer is correct.
Score: 1

Accepted Answers:
1,7,3,9

8) What will be the output of the following code? ***1 point***

```
L1 = ['harry potter', 'matrix', 'spiderman', 'avengers', 'john wick']
L2= ['drishyam', 'spiderman', 'bahubali', 'dhoom', 'race', 'matrix']

L = []


for i in range(len(L1)):

    flag = 0

    for j in range(len(L2)):

        if(L1[i] == L2[j]):
            flag = 1
            break
        else:
            flag = 0

    if(flag == 0):
        L.append(L1[i])

print(L)
```

- Print unique movies of list L1
- Print unique movies of list L2
- Print unique movies of list L1 and L2
- Shows an error

Yes, the answer is correct.
Score: 1

Accepted Answers:
Print unique movies of list L1

9) What will be the output of the following code? ***1 point***

```
for i in range(5,20):
    if(i%5 == 0):
        print(i**2)
```

- Print all perfect squares with square roots between 5-20 and divisible by 5.
- Print all perfect squares with square roots between 5-20 and not divisible by 5.
- Print all perfect squares with square roots between 5-19 and not divisible by 5.
- Print all perfect squares with square roots between 5-19 and divisible by 5.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Print all perfect squares with square roots between 5-19 and divisible by 5.

10) A perfect number is a positive integer that is equal to the sum of its positive divisors, ***1 point*** excluding the number itself. For example, 6 is a perfect number as the sum of its divisors 1,2,3 is equal to 6.
Which function will return True if the number is a perfect number?

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans = ans + i
    if(ans==num):
        return True
    else:
        return False
```

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans+=i
    if(ans==num):
        return False
    else:
        return True
```

```
def perfect_number(num):
    ans=0
    for i in range(3,num):
        if(num%i==0):
            ans = ans + i
    if(ans==num):
        return True
    else:
        return False
```

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans = ans + i
    if(ans!=num):
        return True
    else:
        return False
```

Yes, the answer is correct.
Score: 1

Accepted Answers:

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans = ans + i
    if(ans==num):
        return True
    else:
        return False

```

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Week 5 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-01, 23:59 IST.

Assignment submitted on 2023-02-17, 19:37 IST

1) Binary search can be applied on ___. ***1 point***

- (•) Sorted list
- ( ) Unsorted list
- ( ) Both A and B
- ( ) Any list with any elements

Yes, the answer is correct.
Score: 1
Accepted Answers:
Sorted list

2) Which of the following is a Waveform Audio File Format. ***1 point***

- [x] Wav
- [x] Wave
- [ ] Wv
- [ ] Waves

Yes, the answer is correct.
Score: 1
Accepted Answers:
Wav
Wave

3) Which of the following libraries can help us to convert audio into lyrics? ***1 point***

- (●) speech_recognition
- ( ) text_to_speech
- ( ) speech_to_text
- ( ) text_translate

Yes, the answer is correct.
Score: 1

Accepted Answers:
speech_recognition

4) State True or False: In the monte hall problem, swapping the choice does not increase the chance of winning. (For the large number of experiments) ***1 point***

- ( ) Swapping will decrease the chance of winning.
- (●) Swapping will increase the chance of winning.
- ( ) Swapping will not affect the chance of winning.
- ( ) Swapping may or may not increase the chance of winning.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Swapping will increase the chance of winning.

5) What is the correct way to initialize a dictionary? ***1 point***

- ( ) D = {a-10, b-20, c-30}
- ( ) D = {‘a’-10, ‘b’-20, ‘c’-30}
- ( ) D = {a:10, b:20, c:30}
- (●) D = {‘a’:10, ‘b’:20, ‘c’:30}

Yes, the answer is correct.
Score: 1

Accepted Answers:
D = {‘a’:10, ‘b’:20, ‘c’:30}

6) What is the correct syntax to get all the keys only from a dictionary d? ***1 point***

- ( ) d.key()
- ( ) d.item()
- ( ) d.value()
- (●) d.keys()

Yes, the answer is correct.
Score: 1

Accepted Answers:
d.keys()

7) Which of the following is valid?. ***1 point***

- [x] D = {'a': {'a': 10}, 'b': 10}
- [ ] D = {'a': 'a': 10, 'b': 10}
- [x] D = {'a': {'a': 10}, 'b': {'b': 10}}
- [ ] D = {'a': 'a': 10, 'b': 'b': 10}

Yes, the answer is correct.
Score: 1

Accepted Answers:
D = {'a': {'a': 10}, 'b': 10}
D = {'a': {'a': 10}, 'b': {'b': 10}}

8) For bubble sort, which of the following statements is true? ***1 point***

- If the list is sorted, the algorithm won't work.
- In each iteration consecutive pairs of elements are compared with each other.
- Every element is compared with every other element in the list in each iteration.
- Swapping never happens in bubble sort.

Yes, the answer is correct.
Score: 1

Accepted Answers:
In each iteration consecutive pairs of elements are compared with each other.

9) Which error is faced while accessing an element that is not there in a dictionary? ***1 point***

- KeyError
- IndexError
- RunTimeError
- ValueError

Yes, the answer is correct.
Score: 1

Accepted Answers:
KeyError

10) In dictionaries, d.items() will return _ ***1 point***

- Pairs of all (key, value) together.
- All (keys) and (values) separately.
- All (values) and (keys) separately.
- Pairs of all (value, key) together.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Pairs of all (key, value) together.

Problem Solving Session ()

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Week 6 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-08, 23:59 IST.

Assignment submitted on 2023-02-24, 19:20 IST

1) Which of the following is true about recursion? ***1 point***

- [ ] Recursion always performs better than non-recursive code.
- [x] Recursive code can be reused.
- [x] The base case is necessary for recursion.
- [x] Recursive code can be shorter than non-recursive code

Yes, the answer is correct.
Score: 1

Accepted Answers:
Recursive code can be reused.
The base case is necessary for recursion.
Recursive code can be shorter than non-recursive code

2) If PYTHON is encoded by TCXLSR then DIAMOND will be encoded as? ***1 point***

- ( ) EJBNPOE
- ( ) FKCORPF
- ( ) HMERTSH
- (•) HMEQSRH

Yes, the answer is correct.
Score: 1

Accepted Answers:
HMEQSRH

3) Let L be a list containing different names of movies. Which statement is correct to select a random movie name from that list L? ***1 point***

- (●) random.choices(L)
- ( ) random.select(L)
- ( ) random.movie(L)
- ( ) random.random(L)

Yes, the answer is correct.
Score: 1

Accepted Answers:
random.choices(L)

4) In the list L = [4,6,7,4,6,2,1], What is the index of element '7'? ***1 point***

- ( ) 0
- ( ) 1
- (●) 2
- ( ) 3

Yes, the answer is correct.
Score: 1

Accepted Answers:
2

5) What will be the output of the following code? ***1 point***

```
import string

def shift(word,value):

    letters = string.ascii_lowercase
    new = ''

    for i in range(len(word)):

        if word[i] in letters:

            index = letters.index(word[i])
            new = new + letters[(index+value)%26]

        else:

            new = new + word[i]

    return new
```

- (●) Shift every letter in a given word by value.
- ( ) Shift every letter in a given word by 1.

Shift every letter in a given word by 26.

Returns the same word.

Yes, the answer is correct.
Score: 1
Accepted Answers:
Shift every letter in a given word by value.

6) Library used to import images? ***1 point***

PIL

Imageview

IMG

image

Yes, the answer is correct.
Score: 1
Accepted Answers:
PIL

7) Values of CSV files are separated by? ***1 point***

Commas

Colons

Semi-colons

Slash

Yes, the answer is correct.
Score: 1
Accepted Answers:
Commas

8) what will be the output of the following program? ***1 point***

```
1  def recursive(num):
2
3      if(num==1):
4          print('*')
5          return
6
7      if(num%2 == 0):
8          print('*'*num)
9          recursive(num-1)
10         return
11     else:
12         recursive(num-1)
13         return
14
15 recursive(10)
```

- ********** ********* ******** ******* ****** ***** **** *** ** *
- ********* ******* ***** *** *
- Runs into infinite loop
- ********** ******** ****** **** ** *

Yes, the answer is correct.
Score: 1

Accepted Answers:
****
****
******
****
**
*

9) What will happen if we don't check for a base case in recursion. ***1 point***

- The program will run smoothly
- The program will return a wrong output.
- The program will enter into an infinite loop.
- The program will never run.

Yes, the answer is correct.
Score: 1

Accepted Answers:
The program will enter into an infinite loop.

10) Which of the following is true about recursion? ***1 point***

- Recursion increases the speed of the program.
- Recursion decreases the speed of the program.
- Speed of the program remains the same.
- Recursion is easier to understand than non-recursive programs.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Recursion decreases the speed of the program.

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Week 7 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-15, 23:59 IST.

Assignment submitted on 2023-03-03, 16:08 IST

1) Which of the following is/are uses of functions? ***1 point***

- Gives a higher-level overview of the task to be performed
- Reusability- uses the same functionality at various places
- A better understanding of code
- All of the above
- None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
All of the above

2) What is the output of the following spiral print python function? ***1 point***

```
def spiralprint(m, n, spiralmatrix):
    k = 0
    l = 0
    while (k < m and l < n):
        for i in range(l, n):
            print(spiralmatrix[k][i], end=" ")
        k += 1
        for i in range(k, m):
            print(spiralmatrix[i][n - 1], end=" ")
        n -= 1
        if (k < m):
            for i in range(n - 1, (l - 1), -1):
                print(spiralmatrix[m - 1][i], end=" ")
            m -= 2
        if (l < n):
            for i in range(m - 1, k - 1, -1):
                print(spiralmatrix[i][l], end=" ")
            l += 2
spiralmatrix = [[1, 2, 3, 4, 5, 6],
     [7, 8, 9, 10, 11, 12],
     [13, 14, 15, 16, 17, 18]]

rows = 3
cols = 6
spiralprint(rows, cols, spiralmatrix)
```

- 1 2 3 4 5 6 12 18 17 16 15 14 13 7 8 9 10 11
- 1 2 3 4 5 6 12 18 17 16 15 14 13 (selected)
- 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
- 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Yes, the answer is correct.
Score: 1

Accepted Answers:
1 2 3 4 5 6 12 18 17 16 15 14 13

3) Which of the following library moves the turtle backward? ***1 point***

- turtle.back(distance)
- turtle.bk(distance)
- turtle.backward(distance)
- All of the above (selected)

Yes, the answer is correct.
Score: 1

Accepted Answers:
All of the above

4) Which of the following library has to be imported to plot the route map using GPS locations in python? ***1 point***

- gmplot
- csv
- both (selected)
- None

Yes, the answer is correct.

Score: 1
Accepted Answers:
both

5) bytes, bytearray, memoryview are type of the ___ data type. ***1 point***

- Mapping Type
- Boolean Type
- Binary Types
- All of the above
- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
Binary Types

6) In the Snakes and Ladders game, the least number of times a player has to roll a die with the following ladder positions is _____ ladders = { 3: 20, 6: 14, 11: 28, 15: 34, 17: 74, 22: 37, 38: 59, 49: 67, 57: 76, 61: 78, 73: 86, 81: 98, 88: 91 } ***1 point***

- 4
- 5
- 6
- 7

Yes, the answer is correct.
Score: 1
Accepted Answers:
5

7) Which of the following code snippet will create a tuple in python? ***1 point***

- name = ('kiran','bhushan','madan')
- name = {'kiran','bhushan','madan'}
- name = ['kiran','bhushan','madan']
- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
name = ('kiran','bhushan','madan')

8) What does the following program plot? ***1 point***

```
import random
import matplotlib.pyplot as plt
rn=random.randint(0,9)
print(rn)
l=[0 for i in range(10)]
y=[]
for i in range(10):
  x=int(input())
  y.append(i)
  if x==rn:
    l[x]+=1
plt.plot(y,l)
plt.show()
```

- ○ Plots the random number generated in each iteration
- ◉ Plots the number of times the given input matches with the random number generated
- ○ Plots the input entered for each iteration
- ○ none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
Plots the number of times the given input matches with the random number generated

9) Sentiment analysis involves working with _____ ***1 point***

- ○ a piece of information is useful or not
- ○ a piece of information is biased or unbiased
- ○ a piece of information is true or false
- ◉ a piece of information is positive or negative

Yes, the answer is correct.
Score: 1

Accepted Answers:
a piece of information is positive or negative

10) What does the following code snippet in python compute ***1 point***

```
text1 = input()
len1 = len(text1)
text2 = input()
len2 = len(text2)
for i in range(0,len1-len2+1):
    j = 0
    while ((j < len2) and (text1[i + j] == text2[j])):
        j = j + 1
    if (j==len2):
        print(text2)
```

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- checks whether the two given texts are the same
- searches for text2 in text1
- finds all the occurrences of text2 in text1
- none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
finds all the occurrences of text2 in text1

X


(https://swayam.gov.in)

(https://swayam.gov.in/nc_details/NPTEL)

amazonking616@gmail.com

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

Course outline

- **How does an NPTEL online course work? ()**
- **Week 0 ()**
- **Week 1 ()**
- **Week 2 ()**
- **Week 3 ()**
- **week 4 ()**
- **Week 5 ()**
- **Week 6 ()**
- **Week 7 ()**
- **Week 8 ()**
- Tuples- Python Data Structure (unit?

Week 8 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-22, 23:59 IST.

Assignment submitted on 2023-03-10, 23:03 IST

1) Which of the following is not true about Stylometry Analysis? ***1 point***

- It is the quantitative study of literature style
- It is based on the observation that the authors tend to write in relatively consistent and recognizable ways
- any two people may have the same vocabulary
- It is a tool to study a variety of questions involving style of writing

Yes, the answer is correct.
Score: 1
Accepted Answers:
any two people may have the same vocabulary

2) Which of the following is not true about tuples in python? ***1 point***

- Tuple consumes less memory
- Tuples are immutable
- Tuple supports item deletion
- Tuples does not support modification

Yes, the answer is correct.
Score: 1
Accepted Answers:
Tuple supports item deletion

3) What is the output of the following code snippet in python? ***1 point***

```
name =('kiran','bhushan','madan')
print (name[-1])
```

- invalid syntax
- tuple index out of range
- prints nothing
- madan

Yes, the answer is correct.
Score: 1

Accepted Answers:
madan

4) Strings in python can be created using **1 point**

- single quotes
- double quotes
- triple quotes
- only A and B
- A, B and C

Yes, the answer is correct.
Score: 1

Accepted Answers:
A, B and C

5) Networkx in python is used for which of the following operation(s)? **1 point**

- Visualizing social network
- Analyzing social networks
- Generate social network
- All of the above
- None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
All of the above

6) Which of the following will generate a complete graph in python using the networkx package? **1 point**

- Graph = nx.gnp random graph(25,0.5)
- Graph = nx.gnp random graph(25,1.0)
- Graph = nx.gnp random graph(25,0.25)
- Graph = nx.gnp random graph(25,0.75)

Yes, the answer is correct.
Score: 1

Accepted Answers:
Graph = nx.gnp random graph(25,1.0)

7) Which of the following method will return the RBG value of a pixel in python? **1 point**

- (selected) getpixel()
- RBGvalue()
- pixelValue()
- none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
getpixel()

8) The degree of separation of a complete graph with n nodes is always **1 point**

- n
- n-1
- (selected) 1
- 6

Yes, the answer is correct.
Score: 1

Accepted Answers:
1

9) Which of the following is true about six degrees of separation? **1 point**

- the minimum degree of separation of any node in the network is 6
- the maximum degree of separation of any node in the network is 6
- (selected) the average degree of separation of the nodes in the network is 6
- the degree of separation of every node in the network is 6

Yes, the answer is correct.
Score: 1

Accepted Answers:
the average degree of separation of the nodes in the network is 6

10) What is the output of the following code? **1 point**

```
import nltk
nltk.download('punkt')
from nltk.tokenize import sent_tokenize

mytext = "Have nice day, my friend !!! Programming in Python is fun"
print(sent_tokenize(mytext))
```

- ['Have nice day, my friend!!! Programming in Python is fun']
- (selected) ['Have nice day, my friend!!!', 'Programming in Python is fun']
- 'Have nice day, my friend!!!'
  'Programming in Python is fun'
- Error

Yes, the answer is correct.
Score: 1

Accepted Answers:
['Have nice day, my friend!!!', 'Programming in Python is fun']

X

Week 9 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-29, 23:59 IST.

Assignment submitted on 2023-03-17, 20:45 IST

1) How can we identify which book is written by which author? ***1 point***

- By matching handwriting.
- By analyzing word length distribution with previous books.
- By analyzing the number of pages in a book.
- By analyzing the book's preface.

Yes, the answer is correct.
Score: 1

Accepted Answers:
By analyzing word length distribution with previous books.

2) Is it guaranteed that the following code snippet will consistently yield a True result? ***1 point***

```
4   G = nx.gnp_random_graph(10, 0.5)
5   print(nx.is_connected(G))
```

- True
- False
- It will return neither True nor False
- It will thow an error

Yes, the answer is correct.

Score: 1
Accepted Answers:
False

3) What are the different methods available in Python for generating a string? ***1 point***

- By using single quotes.
- By using double quotes.
- By using triple quotes.
- All of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
All of the above

4) A complete graph will have __ degree of separation ***1 point***

- 1
- 2
- 3
- Depends on the number of nodes.

Yes, the answer is correct.
Score: 1
Accepted Answers:
1

5) Networkx in pythons is used for ***1 point***

- [x] Making networks
- [x] Analyzing networks
- [x] Visualizing networks
- [ ] Breaking networks

Partially Correct.
Score: 0.75
Accepted Answers:
Making networks
Analyzing networks
Visualizing networks
Breaking networks

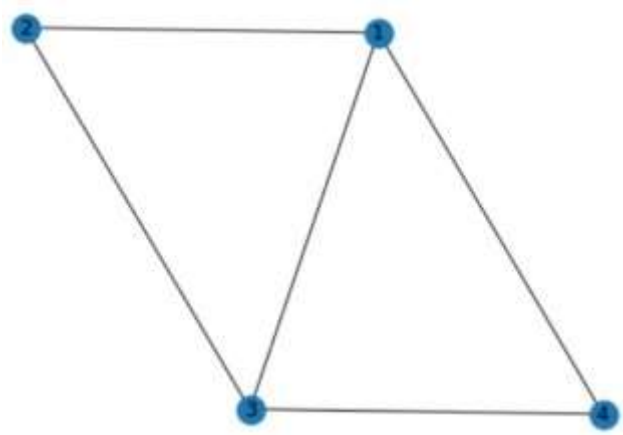
6) In the world, on average, how many hops will it take to connect two people? ***1 point***

- 6
- 7
- 8
- 9
- 10

Yes, the answer is correct.

Score: 1
Accepted Answers:
6

7) How many neighbors does node 4 have? ***1 point***



- 1
- 2
- 3
- 4

Yes, the answer is correct.
Score: 1
Accepted Answers:
2

8) Assuming that the length and breadth remain constant, how can we enhance the precision of the calculated area for a state? ***1 point***

- By increasing the size of the image.
- By increasing the number of points.
- By decreasing the size of the image.
- By decreasing the number of points.

Yes, the answer is correct.
Score: 1
Accepted Answers:
By increasing the number of points.

9) Degree of separation is equivalent to ***1 point***

- Number of nodes in a graph
- Number of edges in a graph
- The average length of the shortest path in a graph
- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
The average length of the shortest path in a graph

10) While calculating the area of Punjab, which of the following will help in more accurate results. ***1 point***

- (●) More points landed in the Punjab region.
- ( ) More points landed outside the Punjab.
- ( ) More points on the overall map.
- ( ) None of the above.

Yes, the answer is correct.
Score: 1

Accepted Answers:
More points landed in the Punjab region.

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X

Week 10 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-04-05, 23:59 IST.

Assignment submitted on 2023-03-24, 15:17 IST

1) Which math problem flames is related to? ***1 point***

- kadane's problem
- Josephus problem
- Conjecture Collatz
- Dijkstra Problem

Yes, the answer is correct.
Score: 1

Accepted Answers:
Josephus problem

2) What will be the output of the following list slicing. ***1 point***

```
1  s = 'The Joy of Computing'
2
3  print(s[3:12])
```

- 'Joy of C'
- ' Joy of C'
- 'Joy of Co'
- ' Joy of Co'

Yes, the answer is correct.

Score: 1

Accepted Answers:
‘ Joy of C’

3) What will be the output of the following program? ***1 point***

```
s = 'I am amazed'
s.replace('a', 'z')
print(s)
```

- I zm zmzzed
- I zm zmazed
- I am zmzzed
- I am amazed

Yes, the answer is correct.
Score: 1

Accepted Answers:
I am amazed

4) What are the consequences of image compression? ***1 point***

- [x] Less size
- [x] Lower quality
- [ ] More size
- [ ] Higher quality

Yes, the answer is correct.
Score: 1

Accepted Answers:
Less size
Lower quality

5) what is the output of the following code? ***1 point***

```
import numpy as np

a = np.array([1,2,3,4,5,6,7,8,9,10,11,12])
print(a.reshape(3,4))
```

- [[1 2 3 4]
  [5 6 7 8]
  [9 10 11 12]]
- [[1 2 3]
  [4 5 6]
  [7 8 9]
  [10 11 12]]
- Error

[[1,2,3,4,5,6]
[7, 8, 9, 10, 11, 12]]

Yes, the answer is correct.
Score: 1
Accepted Answers:
[[1 2 3 4]
[5 6 7 8]
[9 10 11 12]]

6) What will be the output of the following code? ***1 point***

```
import numpy as np

b = np.array([[1,2],[3,4]])

print(np.sum(b, axis = 1))
```

- [4 6]
- [3 7]
- [3 4]
- None of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
[3 7]

7) Amongst which of the following is / are the method of list? ***1 point***

- append()
- extend()
- insert()
- All of the mentioned above

Yes, the answer is correct.
Score: 1
Accepted Answers:
All of the mentioned above

8) The output of the following program will be? ***1 point***

```
word = 'Python'
word[2] = 'n'

print(word)
```

- Pynhon
- Pnthon
- Python

- (●) Error

Yes, the answer is correct.
Score: 1

Accepted Answers:
Error

9) Which of the following is not a method in string? ***1 point***

- ( ) lower()
- ( ) upper()
- ( ) isalpha()
- (●) insert()

Yes, the answer is correct.
Score: 1

Accepted Answers:
insert()

10) What is the output of the following code? ***1 point***

```
1  s = 'Hello Everyone'
2  print(s.lower())
```

- ( ) HELLO EVERYONE
- ( ) Hello Everyone
- ( ) helloeveryone
- (●) hello everyone

Yes, the answer is correct.
Score: 1

Accepted Answers:
hello everyone

X

Week 11 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-04-12, 23:59 IST.

Assignment submitted on 2023-04-01, 20:56 IST

1) Which statement will return the calendar for a whole year? ***1 point***

- calendar.month(year)
- calendar(year)
- calendar.prcal(year)
- calendar.year(year)

Yes, the answer is correct.
Score: 1
Accepted Answers:
calendar.prcal(year)

2) By which statement can we come out of the loop? ***1 point***

- continue
- leave
- catch
- break

Yes, the answer is correct.
Score: 1
Accepted Answers:
break

3) What time.time() will return? ***1 point***

- (●) Time in seconds.
- ( ) Current date and time.
- ( ) Time in minutes
- ( ) The current date, time and year.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Time in seconds.

4) Which library used to get all timezones? ***1 point***

- ( ) selenium
- ( ) calender
- ( ) nltk
- (●) pytz

Yes, the answer is correct.
Score: 1

Accepted Answers:
pytz

5) What is the output of the following code: ***1 point***

```
import pytz
from datetime import datetime as dt

zone = pytz.all_timezones

for i in range(len(zone)):
    print(dt.now(pytz.timezone(zone[i])))
```

- (●) Print the current date and time of all time zones.
- ( ) Print the current date and time of specific time zones.
- ( ) Print the current date of all time zones.
- ( ) Print the current date of some specific time zones.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Print the current date and time of all time zones.

6) In the page rank algorithm, ***1 point***

- ( ) We randomly travel from node to node without any relationship.
- ( ) We randomly travel from node to neighbor node.
- ( ) The maximum visited node will be the leader.
- (●) 2 and 3
- ( ) 1 and 3

Yes, the answer is correct.
Score: 1

Accepted Answers:
2 and 3

7) If we perform the page rank algorithm on the web as a graph, which of the following is true? ***1 point***

- (●) Websites are nodes, and hyperlinks in websites are edges.
- ( ) Hyperlinks in websites are nodes, and websites are edges.
- ( ) Websites will work as nodes and edges.
- ( ) Hyperlinks will work as nodes and edges.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Websites are nodes, and hyperlinks in websites are edges.

8) In the page rank algorithm, the leader is decided by? ***1 point***

- ( ) A node(person) with a maximum number of outgoing edges.
- ( ) A node(person) with a maximum number of incoming edges.
- (●) A node(person) that is visited maximum times.
- ( ) Can not decide.

Yes, the answer is correct.
Score: 1

Accepted Answers:
A node(person) that is visited maximum times.

9) Which statement is correct about the following program? ***1 point***

```
import random
import matplotlib.pyplot as plt

l = []
count = 0

for i in range(10):
    guess = random.randint(1, 10)
    pick = random.randint(1, 10)

    if(guess!=pick):
        count+=1
        l.append(count)
    else:
        count-=1
        l.append(count)

plt.plot(l)
plt.show()
```

- ○ The graph will go up when guess and pick are the same.
- ○ The graph will go down when guess and pick are the same.
- ○ The graph will go up when guess and pick are not the same.
- ◉ Both B and C

Yes, the answer is correct.
Score: 1

Accepted Answers:
Both B and C

10) Which of the following is not used as conditional statement in Python? ***1 point***

- ◉ switch
- ○ if...else
- ○ elif
- ○ None of the mentioned above

Yes, the answer is correct.
Score: 1

Accepted Answers:
switch

X

Week 12 : Assignment 12

The due date for submitting this assignment has passed.

Due on 2023-04-19, 23:59 IST.

Assignment submitted on 2023-04-08, 08:29 IST

1) NLTK _____. ***1 point***

- (●) Helps to work with human language data.
- ( ) Helps to convert machine data into human language.
- ( ) Helps to work on gibberish language.
- ( ) Helps to translate dog language into human language

Yes, the answer is correct.
Score: 1

Accepted Answers:
Helps to work with human language data.

2) The following code will return: ***1 point***

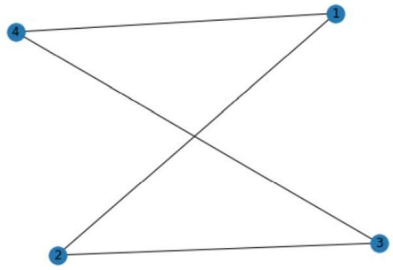
```
def test(word):

    new_word = ''

    for ch in word:

        if ch>='a' and ch<='z':

            temp = ord(ch)
            temp = temp - 32
            temp = chr(temp)
            new_word = new_word + temp

    return new_word
```

- (●) Converting lower case letters into upper case.
- ( ) Converting upper case letters into lower case.
- ( ) Return the same word
- ( ) Error

Yes, the answer is correct.
Score: 1

Accepted Answers:
Converting lower case letters into upper case.

3) How many edges are there in the following graph? ***1 point***



- ( ) Three
- ( ) Five
- (●) Four
- ( ) Two

Yes, the answer is correct.
Score: 1

Accepted Answers:
Four

4) A complete graph will have a degree of separation. ***1 point***

- ( ) 2
- (●) 1
- ( ) 3
- ( ) Depends on the number of nodes.

Yes, the answer is correct.

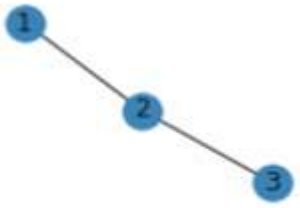
Score: 1

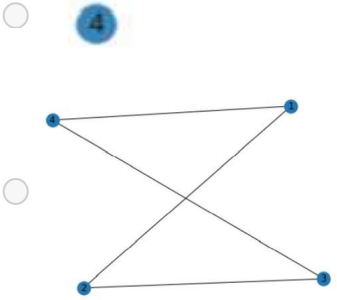
Accepted Answers:

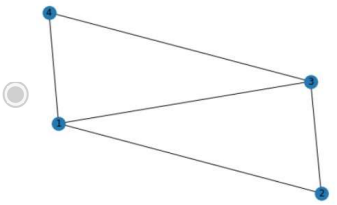
1

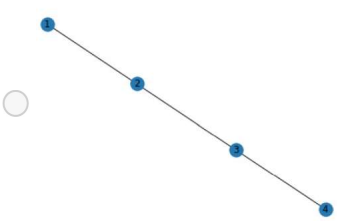
5) What is the output of the following code? ***1 point***

```
import networkx as nx
import matplotlib.pyplot as plt


G = nx.Graph()
G.add_nodes_from([1, 2, 3, 4])
G.add_edges_from([(1, 2), (2, 1), (2, 3), (3,4), (4,1), (3,1)])

nx.draw(G,with_labels=True)
plt.show()
```





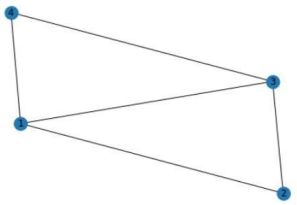




Yes, the answer is correct.

Score: 1

Accepted Answers:



6) What is the shape of the following numpy array? ***1 point***

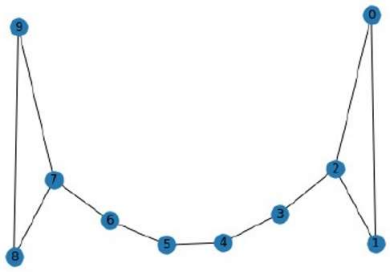
numpy.array([[1,2,3], [4,5,6]])

- (2,3)
- (3,2)
- (3,3)
- (2,2)

Yes, the answer is correct.
Score: 1

Accepted Answers:
(2,3)

7) Which is the following graph? ***1 point***



- Triangle Graph
- Directed Graph
- Barbell Graph
- Wheel graph

Yes, the answer is correct.
Score: 1

Accepted Answers:
Barbell Graph

8) What will be the G.out_degree(3) for the following graph(G)? ***1 point***

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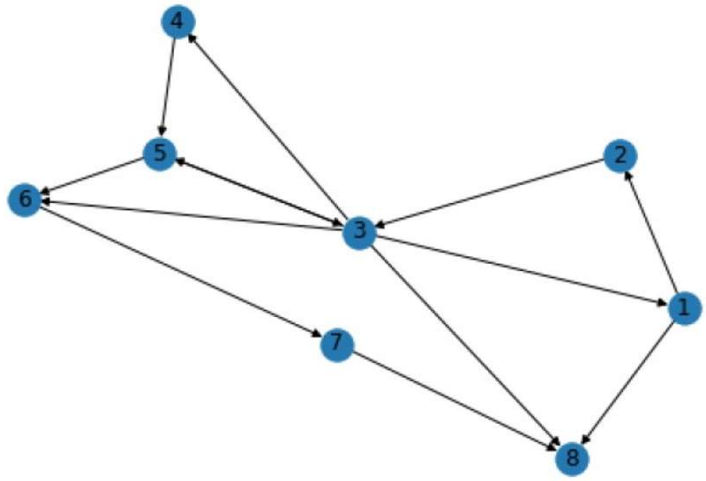


- 4
- 6
- 3
- None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
None of the above

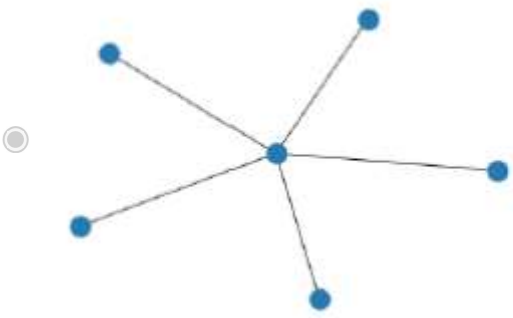
9) What should we do when encountered a sink? ***1 point***

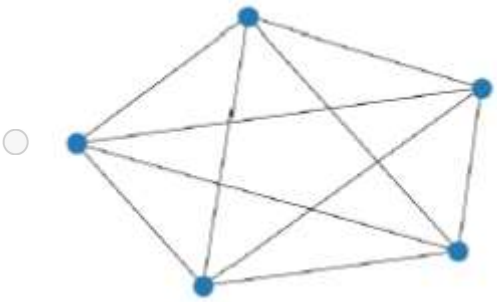
- Stop the algorithm.
- Start with the last node.
- Randomly choose a node from all nodes.
- Randomly choose a node from neighbor nodes.

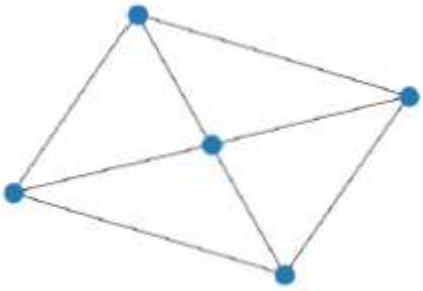
Yes, the answer is correct.
Score: 1

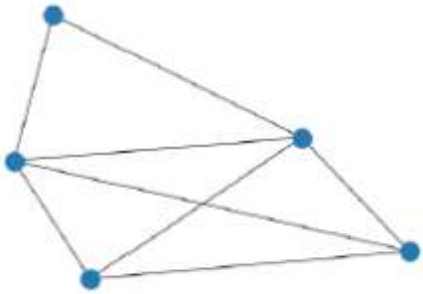
Accepted Answers:
Randomly choose a node from all nodes.

10) Which of the following is a star graph of node 5? ***1 point***









Yes, the answer is correct.
Score: 1

Accepted Answers: