Unit 7 - Week 6

Thank you for taking the Assignment 6.

Assignment 6

Your last recorded submission was on 2020-10-20, 18:06 IST **Due date: 2020-10-28, 23:59 IST.**

NOTE: Python 3.7 has been used for this Assignment

1) Look at the following functions. ***1 point***

```
import random
import string

def create_encryption_key(string1):
    chars=list(set(list(string1)))
    keydict={}
    taken =[]
    for each in chars:
        while(1):
            r=random.choice(chars)
            if(r not in taken) :
                keydict[each]= r
                taken.append(r)
                break
    return(keydict)

def reverse(d):
    d1={}
    for each in d :
        d1[d[each]]= each
    return d1

def encrypt(letter,key):
    l=[]
    for i in range(0,len(letter)):
        l.append(key[letter[i]])
    return(l)
```

Which of the following set of statements correctly represent encryption and decryption using substitution cipher?
It is also given that the set of characters for substitution is chosen from the plain text.

◉
```
plain_text=input("Enter the string you want to encrypt")
key=create_encryption_key(plain_text)
cipher_list= encrypt(plain_text,key)
cipher_text=(' '.join(cipher_list))
plain_list= encrypt(cipher_list,reverse(key))
plain_text= (' '.join(plain_list))
```
○
```
plain_text=input("Enter the string you want to encrypt")
key=create_encryption_key(plain_text)
cipher_list= encrypt(plain_text,key)
cipher_text=(' '.join(cipher_list))
plain_list= encrypt(cipher_list,key)
plain_text= (' '.join(plain_list))
```
○
```
plain_text=input("Enter the string you want to encrypt")
key=create_encryption_key(plain_text)
cipher_list= encrypt(plain_text,key)
cipher_text=(' '.join(cipher_list))
plain_list= encrypt(plain_list,reverse(key))
plain_text= (' '.join(plain_list))
```
○ None of the above

2) Assuming, there is no file named 'file.txt' on my computer, what does the following code do? ***1 point***

```
with open('file.txt','w') as f:
    print(f.read())
        f.write('Hey! I am writing');
f.close()
```

○ Creates a file named file.txt and adds 'Hey! I am writing' to it
○ Shows an error because file does not exist
◉ shows an error because file in not opened in the reading mode
○ None of the above

Assessment submitted.
X

Quiz : Assignment 6 (assessment?name=298)

Week 6 Feedback Form : The Joy of Computing using Python (unit?unit=124&lesson=142)

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3) What does the function 'confidential' do? ***1 point***

```
def confidential(mob_num):
        subs_dict={}
        sec_num=[0] * len(mob_num)
        for i in range(len(string.digits)):
            subs_dict[string.digits[i]]=string.digits[i-1]
        for j in range(len(mob_num)):
            sec_num[j]=subs_dict[mob_num[j]]
        return(sec_num)
```

- Generates the secret code for the given mobile number with every digit coded with the next digit.
- **Generates the secret code for the given mobile number with every digit coded with the previous digit.**
- Generates the secret code for the given mobile number with every digit coded with a random digit.
- Generates the secret code for the given mobile number with every digit coded with a special character.

4) What is the output for the given code? ***1 point***

```
import numpy
mat=numpy.array([[1,2,3],[4,5,6],[7,8,9]])

def add(mat):
        sum=0
        for i in range(2):
            for j in range(2):
                if i==j:
                    sum=sum+mat[i][j]
        return(sum)

print(add(mat))
```

- 15
- 9
- **6**
- 24

5) Which of the following can be used to see the dimension of a numpy array named 'arr' ? ***1 point***

- dim(arr)
- shape(arr)
- **arr.shape**
- arr.shape()

6) What happens if we fail to check the anchor case in a recursive function? ***1 point***

- **Results in an infinite loop**
- RunTimeError
- Never gets executed
- Returns a wrong output

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

```
print('ab'.isalpha())
```

- **True**
- False
- None
- Error

8) If GOLD is encoded as FNKC, then how is PLATINUM encoded? ***1 point***

- NKYRGLSK
- OKZSHMUL
- NJYRGLSK
- **OKZSHMTL**

9) Which of these statements is true? ***1 point***

- Recursion can solve only a subset of problems which Iteration can.
- Recursion is not related to Iteration.
- Recursion cannot solve the problems that can be solved by iteration.
- **Any problem that Recursion can solve, can also be solved by Iteration**

10) Which of the following strategy of play does Tic Tac Toe belong to? ***1 point***

- Max-max
- **Min-max**
- Max-min
- Min-min

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers