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Comsci 20
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<div align="center">Lab 9</div>

1. Write a program that simulates the magic 8 ball.

Hint:
Create a list with at least 10 responses from the list above
Ask user to ask a question.
For example, will I ace my exam today?
Use the choice() to select one response at random and return it

```python
import random
fortune=['yes', 'idk', 'positive', 'for sure', 'v doubtful', 'yes',
'maybe', 'who knows', 'hopefully', 'it is certain']
q=input('what do you want to know? ')
a=random.choice(fortune)
print(a)
```

2. Write a program that assigns "codes" to each letter of the alphabet. For example,

codes = {"a": "%", "b":"9", "c":"?",....}

Write a function that takes in this dictionary and a sentence to encrypt the sentence. Write another function that takes the encrypted sentence and decrypt it

```python
codes={}
codes['a']='z'
codes['b']='y'
codes['c']='x'
codes['d']='w'
codes['e']='v'
codes['f']='u'
codes['g']='t'
codes['h']='s'
codes['i']='r'
codes['j']='q'
codes['k']='p'
codes['l']='o'
codes['m']='n'
codes['n']='m'
```

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```python
codes['o']='l'

codes['p']='k'

codes['q']='j'

codes['r']='i'

codes['s']='h'

codes['t']='g'

codes['u']='f'

codes['v']='e'

codes['w']='d'

codes['x']='c'

codes['y']='b'

codes['z']='a'

codes[' ']=' '


def Encryption (dictionary, sentence):
 sent=''
 for i in sentence:
    letter=dictionary.get(i)
    sent=sent+letter
 return sent


resp=input('give a sentence ')


print(Encryption(codes,resp))


def Decryption (dictionary, encsentence):
 values=list(dictionary.values())
 keys=list(dictionary.keys())
 decrypted=''
 for i in encsentence:
    num=values.index(i)
    let=keys[num]
    decrypted=decrypted+let
 return decrypted
```

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```python
print(Decryption(codes,enc))
```

3. Create a dictionary of phonebooks from the following people

John ---- 408-999-9000
Peter --- 408-677-1020
Jenny ---408-228-1011

Then write a program that output a LIST containing all the names of the people in the phonebook.

```python
phonebook={'john':'408-999-9000', 'peter':'408-677-1020',
'jenny':'408-228-1011'}
names= list(phonebook.keys())
for name in names:
 num=names.index(name)+1
 print(num,'.', name)
```