

Department of Electrical Engineering

Assignment

Date: 07/05/2020

Course Details

Course Title: Programming Fundamentals

Module: 02

Instructor: Sir wagas

Total Marks: 20

Student Details

Name: abdullah

Student ID: 16194

Q1.	(a)	Write a Guess the Word program in Python, The user needs to be able to input letter guesses. A limit should also be set on how many guesses they can use. This means you'll need a way to grab a word to use for guessing, this can be grabbed from a pre-made list. You will also need functions to check if the user has actually inputted a single letter, to check if the inputted letter is in the hidden word (and if it is, how many times it appears), to print letters, and a counter variable to limit guesses.	Marks 5 CLO 2
Q2.	(a)	Write a Password Generator program in Python, which generates a random password for the user. Ask the user how long they want their password to be (minimum 8 to 15 characters), how many letters, symbols and numbers they want in their password. Password generated MUST have a mix of upper and lowercase letters, as well as numbers and symbols	Marks 10 CLO 1
Q3.	(a)	Write a Message Encryption Decryption program in Python, The user will input any text and your program must encrypt the text by using Base64 or HEX. The text must then be decrypted from the encrypted form to show that the decrypted text is the original form.	Marks 10 CLO 1

File Edit Format Run Options Window Help

```
# Q no : 1  
# ans:
```

```
#brightness_4
```

```
import random
```

```
# library that we use in order to choose
```

```
# on random words from a list of words
```

```
name = input("What is your name? ")
```

```
# Here the user is asked to enter the name first
```

```
print("Good Luck ! ", name)
```

```
words = ['khan', 'computer', 'science', 'programming',  
         'python', 'mathematics', 'jonplayer', 'condition',  
         'reverse', 'water', 'board', 'geeks']
```

```
# Function will choose one random
```

```
# word from this list of words
```

```
word = random.choice(words)
```

```
print("Guess the characters")
```

```
guesses = ''
```

```
# any number of turns can be used here
```

```
turns = 12
```

```
while turns > 0:
```

```
    # counts the number of times a user fails  
    failed = 0
```

```
    # all characters from the input
```

```
    # word taking one at a time.
```

```
    for char in word:
```

```
        # ...
```




```
    # Comparing the character with
    # the character in guesses
    if char in guesses:
        print(char)
    else:
        print("_")

        # for every failure 1 will be
        # incremented in failure
        failed += 1

if failed == 0:
    # user will win the game if failure is 0
    # and 'You Win' will be given as output
    print("You Win")

    # this print the correct word
    print("The word is: ", word)
    break

# if user has input the wrong alphabet then
# it will ask user to enter another alphabet
guess = input("guess a character:")

# every input character will be stored in guesses
guesses += guess

# check input with the character in word
if guess not in word:

    turns -= 1

    # if the character doesn't match the word
    # then "Wrong" will be given as output
    print("Wrong")

    # this will print the number of
    # turns left for the user
    print("You have", + turns, 'more guesses')

if turns == 0:
    print("You Loose")
```



Python 3.8.3rc1 (tags/v3.8.3rc1:802eb67, Apr 29 2020, 21
it (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for m

>>>

==== RESTART: C:/Users/PUBG PC/AppData/Local/Programs/Py
What is your name? abdullah

Good Luck ! abdullah

Guess the characters

—

—

—

—

—

—

—

—

guess a character:1

Wrong

You have 11 more guesses

—

—

—

—

—

—

—

—

guess a character:|


```
#q no 2
#ans
import string
import random

def password(userInput):
    specialCharacter = [random.choice(string.punctuation) for character in range(userInput)]
    lowercase = [random.choice(string.ascii_lowercase) for lower in range(userInput)]
    uppercase = [random.choice(string.ascii_uppercase) for upper in range(userInput)]
    numbers = [random.choice(string.digits) for number in range(userInput)]
    generatedPassword = ''.join(specialCharacter + lowercase + uppercase + numbers)
    generatedPassword = ''.join(random.choice(generatedPassword) for value in range(userInput))
    return generatedPassword

question = int(input('Please enter the password length: '))
answer = password(question)
print(answer)
```

>>> 3467

3467

>>>

==== RESTART: C:/Users/PUBG PC/AppData/Local/Programs/Python/Python38/vj.py ====

Please enter the password length: 9

_x^3XiWi

>>>

==== RESTART: C:/Users/PUBG PC/AppData/Local/Programs/Python/Python38/vj.py ====

Please enter the password length: | I



Ln 30 Col 0

TOSHIBA

```
# q no 3
# ans:
|

result = ''
choice = ''
message = ''

while choice != 0:
    choice = input("\n Do you want to encrypt or decrypt the message?\n 1 to encrypt, 2 to decrypt or 0 to exit program. ")

    if choice == '1':
        message = input('\nEnter message for encryption: ')
        for i in range(0, len(message)):
            result = result + chr(ord(message[i]) - 2)

        print(result + '\n\n')
        result = ''

    if choice == '2':
        message = input('\nEnter message to decrypt: ')
        for i in range(0, len(message)):
            result = result + chr(ord(message[i]) + 2)

        print(result + '\n\n')
        result = ''

    elif choice != '0':
        print('You have entered an invalid input, please try again. \n\n')
```


Python 3.8.3rc1 Shell

Python 3.8.3rc1 (tags/v3.8.3rc1:802eb67, Apr 29 2020, 21:39:14) [MSC v.1924 64-bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.
>>>

==== RESTART: C:/Users/PUBG PC/AppData/Local/Programs/Python/Python38/xgj.py ====

Do you want to encrypt or decrypt the message?

1 to encrypt, 2 to decrypt or 0 to exit program. 1

Enter message for encryption: 5

3

You have entered an invalid input, please try again.

Do you want to encrypt or decrypt the message?

1 to encrypt, 2 to decrypt or 0 to exit program. 2

Enter message to decrypt: 6

8

Do you want to encrypt or decrypt the message?

1 to encrypt, 2 to decrypt or 0 to exit program.

