

Department of Electrical Engineering

Assignment

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Course detail

Instructor:	<u>waqas sir</u>
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Student Details

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Q1. User needs to be able to write a guess the word program in python, the 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.

Answer

```
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 = ['rainbow', 'computer', 'science', 'programming',
         'python', 'mathematics', 'player', '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 that 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")
```

Output:

What is your name? Gautam

Good Luck! Gautam

Guess the characters

—

—

—

—

—

guess a character:g

g

—

—

—

—

guess a character:e

g

e

e

—

—

guess a character:k

g

e

e

k

—

guess a character:s

g

e

e

k

s

You Win

The word is: geeks

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

Answer

```
import
string

import random
def password(userInput):
    specialCharacter = [random.choice(string.punctuation) for
character in range(userInput)]
    wordLower = [random.choice(string.ascii_lowercase) for
lower in range(userInput)]
    wordUpper = [random.choice(string.ascii_uppercase) for
upper in range(userInput)]
    numbers = [random.choice(string.digits) for number in
range(userInput)]
    generatedPassword = ''.join(specialCharacter + wordLower +
wordUpper + 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)
```

Q3.

Encryption Decryption program

```
from cryptography.fernet import Fernet
key = b'' # Use one of the methods to get a key (it must be the same when decrypting)
input_file = 'test.txt'
output_file = 'test.encrypted'

with open(input_file, 'rb') as f:
    data = f.read()

fernet = Fernet(key)
encrypted = fernet.encrypt(data)

with open(output_file, 'wb') as f:
    f.write(encrypted)
```

```
from cryptography.fernet import Fernet
key = b'' # Use one of the methods to get a key (it must be the same as used in
encrypting)
input_file = 'test.encrypted'
output_file = 'test.txt'

with open(input_file, 'rb') as f:
    data = f.read()

fernet = Fernet(key)
encrypted = fernet.decrypt(data)

with open(output_file, 'wb') as f:
    f.write(encrypted)
```