Group Project:

Human Readable Password Generator Project

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CYSE 250: Basic Cyber Security Programing and Networking

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Introduction

For my project I have created a somewhat random password generator. I say "somewhat random" because I made it so that the password can still be remembered by humans by using real words instead of random characters. It creates a passphrase by combining a noun, an adjective, a number, and a special character. This creates a password for people that is a bit more secure than a password created without these ideas in mind.
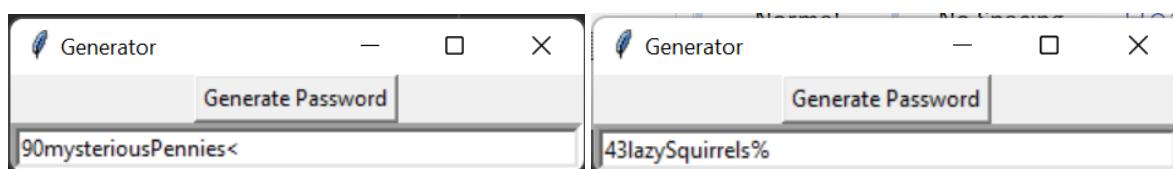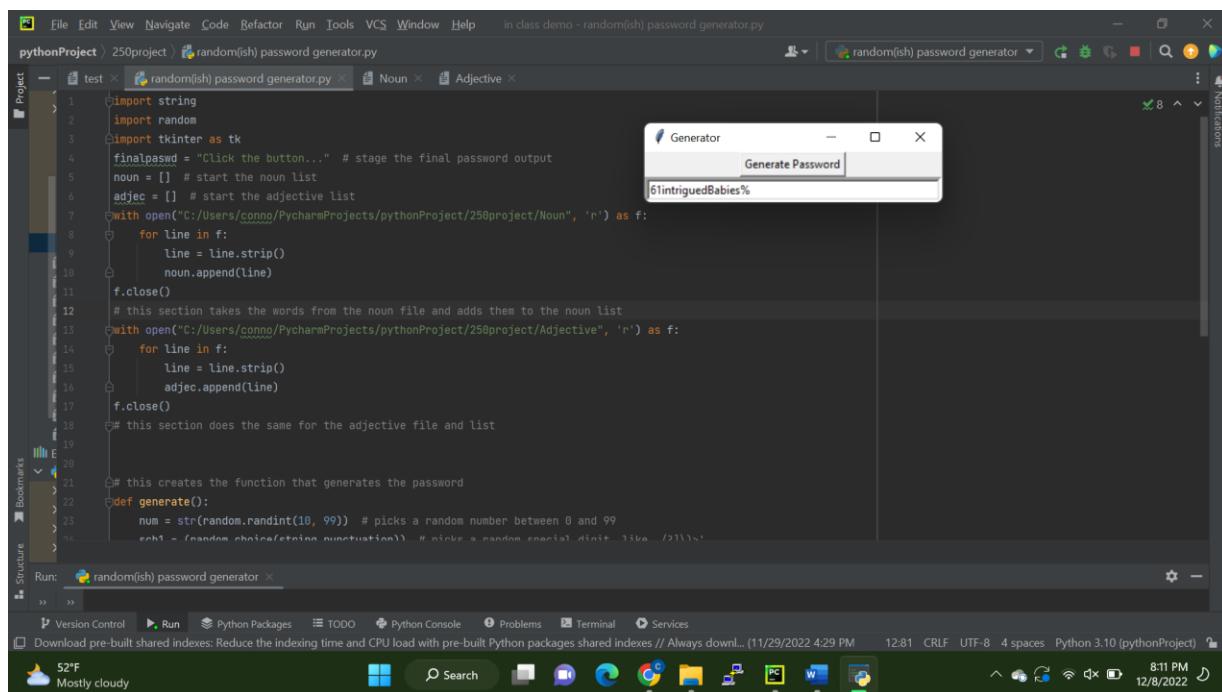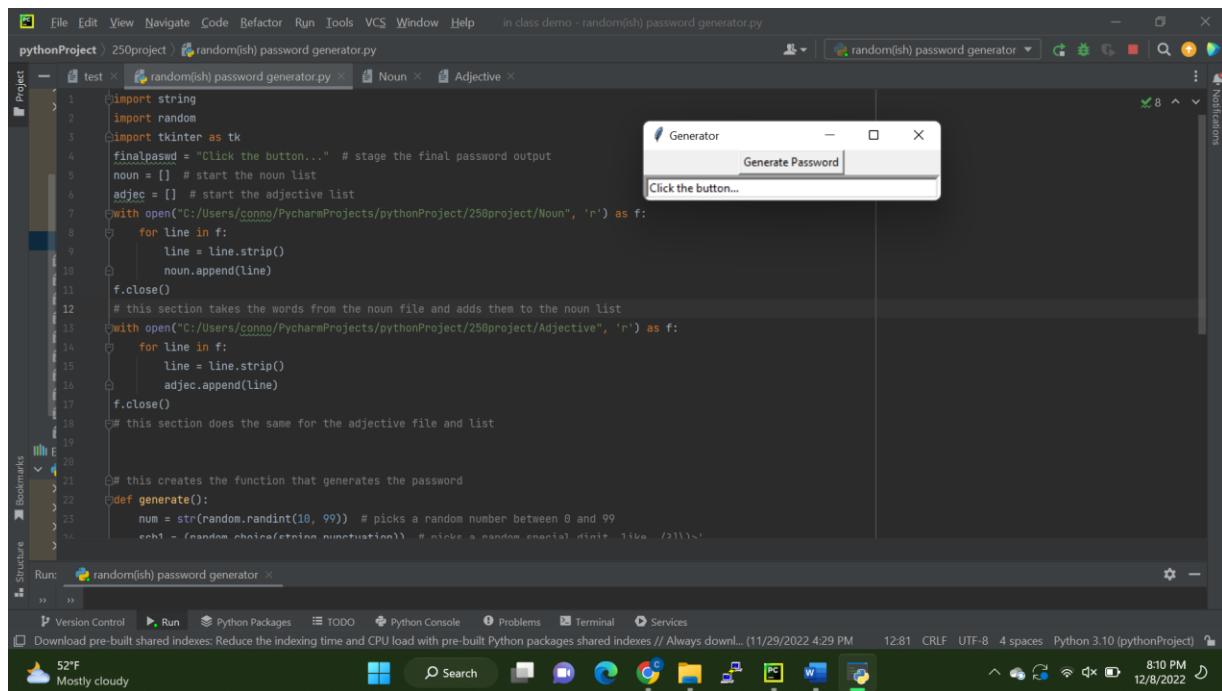
Problem statement

The problem I am trying to solve with this project is that normal randomly generated passwords are very hard to remember for people. With these passwords being confusing many people choose not to use them and instead use simple passwords that can be unsecure. That is why I would be using real words. Also, a passphrase is more secure than a single word password.

Materials Used

I am using PyCharm Community Edition as a code compiler for python 3.

Results

The program when run creates a new window with a button that can be clicked to generate a password. The new password is then entered into the box for people to copy and use. A way I could improve this is by making it into an app so that people can download it and use it.

```python
import string
import random
import tkinter as tk
finalpaswd = "Click the button..."  # stage the final password output
noun = []  # start the noun list
adjec = []  # start the adjective list
with open("C:/Users/conno/PycharmProjects/pythonProject/250project/Noun", 'r') as f:
    for line in f:
        line = line.strip()
        noun.append(line)
f.close()
# this section takes the words from the noun file and adds them to the noun list
with open("C:/Users/conno/PycharmProjects/pythonProject/250project/Adjective", 'r') as f:
    for line in f:
        line = line.strip()
        adjec.append(line)
f.close()
# this section does the same for the adjective file and list


# this creates the function that generates the password
def generate():
    num = str(random.randint(10, 99))  # picks a random number between 0 and 99
```

Generator   —   □   ✕
Generate Password
Click the button...

Generator   —   □   ✕
Generate Password
61intriguedBabies%

Generator   —   □   ✕
Generate Password
90mysteriousPennies<

Generator   —   □   ✕
Generate Password
43lazySquirrels%

References

How to generate a random number in Python. Python Central. (2021, December 30). Retrieved December 7, 2022, from https://www.pythoncentral.io/how-to-generate-a-random-number-in-python/

Real Python. (2022, July 18). *Python GUI programming with Tkinter*. Real Python. Retrieved December 7, 2022, from https://realpython.com/python-gui-tkinter/

Appendix

Main code

```python
import string
import random
import tkinter as tk
finalpaswd = "Click the button..."  # stage the final password output
noun = []  # start the noun list
adjec = []  # start the adjective list
with open("C:/Users/conno/PycharmProjects/pythonProject/250project/Noun", 'r') as f:
    for line in f:
        line = line.strip()
        noun.append(line)
f.close()
# this section takes the words from the noun file and adds them to the noun list
with open("C:/Users/conno/PycharmProjects/pythonProject/250project/Adjective", 'r') as f:
    for line in f:
        line = line.strip()
        adjec.append(line)
f.close()
# this section does the same for the adjective file and list


# this creates the function that generates the password
def generate():
    num = str(random.randint(10, 99))  # picks a random number between 0 and 99
    sch1 = (random.choice(string.punctuation))  # picks a random special digit, like
./?]\)>'
    nounpick = (random.choice(noun))  # picks a random noun from the noun list
    adjecpick = (random.choice(adjec))  # picks a random adjective from the adjective list
    finalpass = (num + adjecpick + nounpick + sch1)  # puts all the items together
    box.delete(0, tk.END)  # removes anything in the input/typing box
    box.insert(0, finalpass)  # puts the new password in the input/typing box


window = tk.Tk()  # creates the pop-up window
window.title("Generator")  # names the window
butto = tk.Button(text="Generate Password", command=generate)  # creates the button
box = tk.Entry(width=50, borderwidth=5)  # creates the input/typing box
box.insert(0, finalpaswd)  # puts the placeholder text into the input/typing box
butto.pack()
box.pack()
window.mainloop()
```

supporting documents

Nouns

```
Lions
Tigers
Bears
Boats
Houses
Cats
Rivers
Buses
Wishes
Pitches
Boxes
```

```
Pennies
Babies
Cities
Daisies
Men
Women
Teeth
People
Mice
Knives
Potatoes
Cacti
Tomatoes
Fish
Deer
Aircraft
Animals
Elephants
Leopards
Panthers
Cheetahs
Jaguars
Hippopotamus
Squirrels
Wombats
Otters
Crocodiles
Chipmunks
Meerkats
Raccoons
Rabbits
Moles
Bison
Alligators
Aardvarks
Antelopes
Eagles
Beavers
Bats
```

Adjectives

```
cool
smart
funny
abrupt
acidic
adorable
adventurous
aggressive
agitated
alert
aloof
bored
brave
bright
colossal
condescending
confused
cooperative
corny
costly
courageous
cruel
```

despicable
determined
diminutive
distressed
disturbed
dizzy
exasperated
excited
exhilarated
extensive
exuberant
frothy
frustrating
funny
fuzzy
gaudy
graceful
greasy
grieving
gritty
grotesque
grubby
grumpy
handsome
happy
hollow
hungry
hurt
icy
ideal
immense
impressionable
intrigued
irate
foolish
frantic
fresh
friendly
frightened
frothy
frustrating
glorious
gorgeous
grubby
happy
harebrained
healthy
helpful
helpless
high
hollow
homely
large
lazy
livid
lonely
loose
lovely
lucky
mysterious
narrow
nasty
outrageous
panicky
perfect
perplexed
quizzical

teeny
tender
tense
terrible
tricky
troubled
unsightly
upset
wicked
yummy
zany
zealous
zippy