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1 from tkinter import *
2 from tkinter import messagebox
3 from random import choice, randint, shuffle
4 import pyperclip
5 import json
6
7 # ----- PASSWORD GENERATOR
  ----- #
8
9 #Password Generator Project
10 def generate_password():
11     letters = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h'
12 , 'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q', 'r', '
13 s', 't', 'u', 'v', 'w', 'x', 'y', 'z', 'A', 'B', 'C'
14 , 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', '
15 N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X'
16 , 'Y', 'Z']
17     numbers = ['0', '1', '2', '3', '4', '5', '6', '7'
18 , '8', '9']
19     symbols = ['!', '#', '$', '%', '&', '(', ')', '*',
20 , '+']
21
22     password_letters = [choice(letters) for _ in
23 range(randint(8, 10))]
24     password_symbols = [choice(symbols) for _ in
25 range(randint(2, 4))]
26     password_numbers = [choice(numbers) for _ in
27 range(randint(2, 4))]
28
29     password_list = password_letters +
30 password_symbols + password_numbers
31     shuffle(password_list)
32
33     password = "".join(password_list)
34     password_entry.insert(0, password)
35     pyperclip.copy(password)
36
37 # ----- SAVE PASSWORD
  ----- #
38
39 def save():
40

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29     website = website_entry.get()
30     email = email_entry.get()
31     password = password_entry.get()
32     new_data = {
33         website: {
34             "email": email,
35             "password": password,
36         }
37     }
38
39     if len(website) == 0 or len(password) == 0:
40         messagebox.showinfo(title="Oops", message="
Please make sure you haven't left any fields empty.")
41     else:
42         try:
43             with open("data.json", "r") as data_file:
44                 #Reading old data
45                 data = json.load(data_file)
46         except FileNotFoundError:
47             with open("data.json", "w") as data_file:
48                 json.dump(new_data, data_file, indent
=4)
49         else:
50             #Updating old data with new data
51             data.update(new_data)
52
53             with open("data.json", "w") as data_file:
54                 #Saving updated data
55                 json.dump(data, data_file, indent=4)
56         finally:
57             website_entry.delete(0, END)
58             password_entry.delete(0, END)
59
60
61 # ----- FIND PASSWORD
   ----- #
62 def find_password():
63     website = website_entry.get()
64     try:
65         with open("data.json") as data_file:
66             data = json.load(data_file)

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67         except FileNotFoundError:
68             messagebox.showinfo(title="Error", message="
No Data File Found.")
69         else:
70             if website in data:
71                 email = data[website]["email"]
72                 password = data[website]["password"]
73                 messagebox.showinfo(title=website,
message=f"Email: {email}\nPassword: {password}")
74             else:
75                 messagebox.showinfo(title="Error",
message=f"No details for {website} exists.")
76
77
78 # ----- UI SETUP
----- #
79
80 window = Tk()
81 window.title("Password Manager")
82 window.config(padx=50, pady=50)
83
84 canvas = Canvas(height=200, width=200)
85 logo_img = PhotoImage(file="logo.png")
86 canvas.create_image(100, 100, image=logo_img)
87 canvas.grid(row=0, column=1)
88
89 #Labels
90 website_label = Label(text="Website:")
91 website_label.grid(row=1, column=0)
92 email_label = Label(text="Email/Username:")
93 email_label.grid(row=2, column=0)
94 password_label = Label(text="Password:")
95 password_label.grid(row=3, column=0)
96
97 #Entries
98 website_entry = Entry(width=21)
99 website_entry.grid(row=1, column=1)
100 website_entry.focus()
101 email_entry = Entry(width=35)
102 email_entry.grid(row=2, column=1, columnspan=2)
103 email_entry.insert(0, "lenargasimov@gmail.com")

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```
104 password_entry = Entry(width=21)
105 password_entry.grid(row=3, column=1)
106
107 # Buttons
108 search_button = Button(text="Search", width=13,
    command=find_password)
109 search_button.grid(row=1, column=2)
110 generate_password_button = Button(text="Generate
    Password", command=generate_password)
111 generate_password_button.grid(row=3, column=2)
112 add_button = Button(text="Add", width=36, command=
    save)
113 add_button.grid(row=4, column=1, columnspan=2)
114
115 window.mainloop()
```