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1 import json
2
3 #initialize a dictionary called passwords.
4 passwords = {}
5
6 #function placed throughout to ask the user what they want to do
7 def chooseAction():
8     global programType
9     programType = str(input("Input A to add a password, input D to delete a password, or input F to find a password: "))
10    if programType == "A" or programType == "a":
11        addPassword()
12    elif programType == "F" or programType == "f":
13        findPassword()
14    elif programType == "D" or programType == "d":
15        deletePassword()
16    elif programType == "DA" or programType == "da":
17        deleteAll()
18    else:
19        print("Not a valid program")
20        chooseAction()
21
22 #takes the current json and makes it a python dictionary which then adds the password the user wants which then replaces the old json with a new one with the new json object.
23 def addPassword():
24     websiteName = input("What is the name of the website: ")
25     password = input("What is the password: ")
26     passwords[websiteName] = password
27     with open("passwords.json") as passwordFile:
28         passwordsFile = json.load(passwordFile)
29     tempPasswordDict = passwordsFile | passwords
30     with open("passwords.json", "w") as outfile:
31         json.dump(tempPasswordDict, outfile)
32     print(f"Successfully added a password for {websiteName}!")
33     chooseAction()
34
35 #makes the json object a python dictionary and checks if the inputed name is in the json object and if it is it tells the user their password.
36 def findPassword():
37     with open("passwords.json") as passwordFile:
38         passwordsFile = json.load(passwordFile)
39     wesbiteName = input("What is the name of the website you want to find a password for: ")
40     if wesbiteName in passwordsFile:
41         print(f"The password for {wesbiteName} is '{passwordsFile[wesbiteName]}'.")
42     else:
43         print("That is not a website you have password saved for.")
44     chooseAction()
45
46 #makes the json object a python dictionary then uses the python pop() method to remove the password at the name specified by the user then makes the json file have the python dictionary.
47 def deletePassword():
48     websiteName = input("What is the name of the website that has a password you want removed?: ")
49     with open("passwords.json") as passwordFile:
50         passwordsFile = json.load(passwordFile)
51     if websiteName in passwordsFile:
52         passwordsFile.pop(websiteName)
53         with open("passwords.json", "w") as passwordFile:
54             json.dump(passwordsFile, passwordFile)
55     print("Deletion successful!")
56     else:
57         print("That is not a website you have a password saved for.")
58     chooseAction()
59
60 def deleteAll():
61     emptyPasswords = {}
62     check = input("Are you sure you want to DELETE every password saved(cannot be undone)(y/n)? ")
63     if check == "y" or check == "Y":
64         with open("passwords.json", "w") as passwordFile:
65             json.dump(emptyPasswords, passwordFile)
66         print("Deletion successfull.")
67     elif check == "n" or check == "N":
68         print("Passwords not deleted.")
69     chooseAction()
70
71 #calls the chooseAction function to ask the user at the start of the program.
72 chooseAction()

```