Day 18 (25/08/23): (In-built Modules [RegX], Python Scope, OTP & Captcha generation)

Inbuilt-Module:
1) RegX
Python Regular Expression:
It can be used to check if a string contains the specified search patterns.
Use 'as' Keyword to assign a different variable for 're'.
"Ex: import re as a"

Code:

```
import re
        txt="hi guys i am suffering from fever"
        word=input('Enter the Word: ')
        y=re.search(word,txt)
        print(y)
```

Output:
#if available
Enter the Word: fever
<re.Match object; span=(28, 33), match='fever'>

#if not available
Enter the Word: java
None

Type → <cls 're.Match'> (re.Match==True)

#Error: FileNotFound Error is the opened file is not available in the location specified or deleted.

Code:

```
f=open("menus.txt","r")
        txt1=f.read()
        f.close() #close after read
        print(f"menus->{txt1}")
        print("")
        food=input("Enter your food: ")
        x=re.search(food,txt1)
        z=re.findall(food,txt1)
        print(len(x))
        if x:
            print("Available")
        else:
            print("Not Available")
```

#Use findall() to find number of the specified strings in the database.

Python Scope:

A variable is only available inside the region is created, is called scope.

Types:

Local
Global

Global ():

Used for any defined functions after assigning. Common for all the functions upcoming

Local ():

Used for assigning variable for individual defined function.

Code:

```
#python-scope:
    def localscope():
        hername="Hello"
        print(x)
    def chennai():
        ponnuname="Malar"
        print(f"ponnu name is {ponnuname}")
    def kumbakonam():
        ponnuname="Malar"
        print(f"ponnu name is {ponnuname}")
    def trichy():
        ponnuname="Malar"
        print(f"ponnu name is {ponnuname}")
ponnuname="Malar"
    def chenai():
        global ponnuname
        print(f"ponnu name is {ponnuname}")
    def thiruchi():
        global ponnuname
        print(f"ponnu name is {ponnuname}")
hotel()
```

OTP Generation:
Create New random and new OTPs. (Import random library to create random numbers)

Code:

```
print("")
#OTP Verification:
import random
otp=random.randint(0000,9999)
print(f"Your OTP is {otp}")
print("")
```

Captcha Generation:
Create different words and numbers to create captcha. (Import random and string library to create random numbers)

Code:

```
import string
import random
captcha=''.join(random.choices(string.ascii_uppercase+string.ascii_lowercase+stri
ng.digits,k=5))
print(f"Your Captcha is --> {captcha}")
```

NOTE: Try websites to send OTP and Captchas to a mobile number