< 26/09/2025, Friday >

Data Structure: These are the way of organizing &
sorting the data so that they can be accessed and
modified efficiently.

python provides both <u>built-in</u> data str & allow us to
implement <u>user defined</u> data str.

<u>Built-in ds:</u>
   list : [ ]
   tuple : ( )
   set : { }
   dict : { Key : value }

List ( ), [ ] - It is a heterogeneous data collector & its
      ordered, mutable & allow duplicated
      ↓   with
   we can hold ^the position.

append ( ) - It is used to add values at the end.
pop( ) - helps to delete values from the end.
clear( ) - It helps to delete the values only but list
          remains the same.
del - It will delete the entire list.
Len ( ) - It is used to return the no. of elements in the
      list.   ex : len (nums)
count ( ) - It will helps to count how many times a
          number is presented.

) Create even, odd, prime number list from 1 to 20 numbers.

```
evL = []              #1st we need to create empty list to store even,
od = []                    odd & prime numbers
pL = []
for i in range(1, 21, 1):
    if i % 2 == 0:
        evL.append(i)
    else:
        od.append(i)
        for j in range(2, i):
            if (i % j == 0):
                break
        else:
            pL.append(i)
print("Even numbers :", evL)
print("odd numbers :", od)
print("prime numbers :", pL)
```

o/p

Even numbers : [2, 4, 6, 8, 10, 12, 14, 16, 18, 20]

odd ——— : [1, 3, 5, 7, 9, 11, 13, 15, 17, 19]

prime : [1, 2, 3, 5, 7, 11, 13, 17]