

In [5]:

```
num=[1,2,3,4,5]
sq=[]
for n in num:
    sq.append(n**2)
print(sq)
```

[1, 4, 9, 16, 25]

In [6]:

```
num=[1,2,3,4,5]
sq=[n**2 for n in num]
print(sq)
```

[1, 4, 9, 16, 25]

In [7]:

```
n_letters=[]
for letter in 'simplilearn':
    n_letters.append(letter)
print(n_letters)
```

['s', 'i', 'm', 'p', 'l', 'i', 'l', 'e', 'a', 'r', 'n']

In [8]:

```
n_letters=[letter for letter in 'simplilearn']
print(n_letters)
```

['s', 'i', 'm', 'p', 'l', 'i', 'l', 'e', 'a', 'r', 'n']

In [9]:

```
cars=['jaguar','land rover','tesla','toyota','tata']
newlist=[]
for x in cars:
    if "s" in x:
        newlist.append(x)
print(newlist)
```

['tesla']

In [11]:

```
cars=['jaguar','land rover','tesla','toyota','tata']
newlist=[x for x in cars if "a" in x]
print(newlist)
```

['jaguar', 'land rover', 'tesla', 'toyota', 'tata']

In [12]:

```
new_list=[x for x in range(100) if x>50]
print(new_list)
```

```
[51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99]
```

In [13]:

```
cars=['jaguar','land rover','tesla','toyota','tata']
new_cars=[x if x!="tesla" else "audi" for x in cars]
print(new_cars)
```

```
['jaguar', 'land rover', 'audi', 'toyota', 'tata']
```

In [14]:

```
numbers=[]
for i in range(0,21):
    numbers.append(i%2==0)
print(numbers)
```

```
[True, False, True, False, True, False, True, False, True, False, True, False, True, False, True, False, True, False, True, False, True]
```

In [15]:

```
numbers=[i%2==0 for i in range(0,21)]
print(numbers)
```

```
[True, False, True, False, True, False, True, False, True, False, True, False, True, False, True, False, True, False, True, False, True]
```

In [20]:

```
import pandas as pd
import numpy as np
```

In [21]:

```
A=np.random.randint(10,size=(4,4))
print(A)
```

```
[[0 5 0 4]
 [8 7 4 9]
 [0 1 3 0]
 [7 7 2 4]]
```

In [22]:

```
max_element=[max(i) for i in A]
max_element
```

Out[22]:

```
[5, 9, 3, 7]
```

In []: