```
1  Python class 2020
2  Coder: Mohammad Foroughi (+989226219173)
```

shorthand coding

for loops and if conditions

In [3]:
```python
1  a = []
2  for i in range(10):
3      a.append(i)
4  print("a: ", a)
5
6  b = [i for i in range(10)]
7  print("b: ", b)
```

```
a:  [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
b:  [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

In [11]:
```python
1  a = []
2  for i in range(10):
3      if i >= 5:
4          a.append(i)
5  print("a: ", a)
6
7  b = [i for i in range(10) if i>=5]
8  print("b: ", b)
```

```
a:  [5, 6, 7, 8, 9]
b:  [5, 6, 7, 8, 9]
```

In [16]:
```python
1  a = 1
2  if a >= 5: print(a)
3  else:
4      print("It's not greater than 5")
```

```
It's not greater than 5
```

Astricks

In [17]:
```python
"""
Astricks ---> Everything
*
**
"""

# one of things you can use astricks
print(1 * 3)
print(2 ** 3)
```

```
3
8
```

In [18]:
```python
from math import *
print(sqrt(4))
```

```
2.0
```

In [20]:
```python
numbers = [1, 2, 3, 4, 5]
print(*numbers)
print(numbers[0], numbers[1], numbers[2], numbers[3], numbers[4])
```

```
1 2 3 4 5
1 2 3 4 5
```

In [22]:
```python
a = [1, 2, 3]
b = [*a, 4, 5, 6]
print(b)

a = [1, 2, 3]
b = [4, 5, 6]
print(a+b)
```

```
[1, 2, 3, 4, 5, 6]
[1, 2, 3, 4, 5, 6]
```

In [23]:
```python
# dictionaries, zip, enumerate ---> 2 dimensional
Charecteristics = {
    "Name": "Mohammad",
    "age" : 26,
    "gender": "Males"
}

print("This is {Name}. I'm {age} years old. I'm a kind of {gender}".format(
```

```
This is Mohammad. I'm 26 years old. I'm a kind of Males
```

In [28]:
```python
"""
*args
**kwargs
"""

def elements(*args):
    print(args)

elements(1, 2, 3, 5)
```

```
(1, 2, 3, 5)
```

In [29]:
```python
def elements(**kwargs):
    print(kwargs)

elements(firstname="Mohammad", lastname="Foroughi", age=26)
```

```
{'firstname': 'Mohammad', 'lastname': 'Foroughi', 'age': 26}
```

In [30]:
```python
def elements(*args, **kwargs):
    print(args)
    print(kwargs)

elements(1, 2, 3, firstname="Mohammad", lastname="Foroughi", age=26)
```

```
(1, 2, 3)
{'firstname': 'Mohammad', 'lastname': 'Foroughi', 'age': 26}
```