

Advanced Python - Conditional Statement

- if
- if else
- if elif else
- nested if

note: we never use multiple if cause it will consume space python will have to check each condition every time and the frontend will be very slow

```
In [5]: if True:                                # Indentation is always 4 spaces
        print('Data Science')
```

Data Science

```
In [7]: if False:
        print('Data Science')
        print('bye for now')
```

bye for now

```
In [9]: if True:
        print('Data Science')
        print('bye for now')
```

Data Science

bye for now

```
In [11]: if True:
          print('Data Science')
        else:
          print('bye for now')
```

Data Science

```
In [13]: if False:
          print('Data Science')
        else:
          print('bye for now')
```

bye for now

Programs

```
In [16]: # Check if even number
          # after deviding number by two if reminder=0 it's a even number
          x = 4
          r = x % 2                                # modulus r= reminder after x divided by 2 operation
```

```
if r == 0:
    print('Even Number')
```

Even Number

```
In [20]: # if after divided by 2 remainder is 1 then it's odd number
x = 5
r = x % 2                                # modulus r= remainder after x divided by 2 operation

if r == 0:
    print('Even Number')
if r != 0:
    print('Odd Number')
```

Odd Number

```
In [22]: # if after divided by 2 remainder is 1 then it's odd number
x = 5
r = x % 2                                # modulus r= remainder after x divided by 2 operation

if r == 0:
    print('Even Number')
if r == 1:
    print('Odd Number')
```

Odd Number

```
In [24]: x = 4
r = x % 2                                # modulus r= remainder after x divided by 2 operation

if r == 0:
    print('Even Number')
else:
    print('Odd Number')
```

Even Number

```
In [26]: x = 3
r = x % 2                                # modulus r= remainder after x divided by 2 operation

if r == 0:
    print('Even Number')
    if x > 5:                             # Nested if
        print("Greater Number")
else:                                     # else- if none of above condition satisfies
    print('Odd Number')
```

Odd Number

```
In [30]: x = 4
r = x % 2                                # modulus r= remainder after x divided by 2 operation

if r == 0:
    print('Even Number')
    if x > 5:                             # Nested if
        print('Greater Number')
else:
    print('Less Number')
```

```

else:                                     # else- if none of above condition satisfies
    print('Odd Number')

```

Even Number

Less Number

```

In [32]: x = 6
         r = x % 2                        # modulus r= reminder after x divided by 2 operation

         if r == 0:
             print('Even Number')
             if x > 5:                    # Nested if
                 print('Greater Number')
             else:
                 print('Less Number')
         else:                             # else- if none of above condition satisfies
             print('Odd Number')

```

Even Number

Greater Number

```

In [34]: x = 2

         if x == 1:
             print('one')
         if x == 2:
             print('two')
         if x == 3:
             print('three')
         if x == 4:
             print('four')

```

two

```

In [38]: x = 5

         if x == 1:
             print('one')
         if x == 2:
             print('two')
         if x == 3:
             print('three')
         if x == 4:
             print('four')
         # there is no instruction to print if number is other than(1,2,3,4) hence no output

```

```

In [40]: x = 9

         if x == 1:
             print('one')
         if x == 2:
             print('two')
         if x == 3:
             print('three')
         if x == 4:
             print('four')

```

```
else:
    print('Number not found')
```

Number not found

```
In [56]: x = int(input('Enter the Number: ')) # Receiving input from user
        # any input value is consider as string to perform arithmetic operation first h

r = x % 2 # modulus # storing reminder in r

if r == 0: # applying condition to check if it's even number
    print('Even Number')
    if x > 3: # nested if - to check if the number is greater
        print('Number is greater than 3')
    elif x < 3: # elif - to check if the number is less than 3
        print('Number is less than 3')
    else: # else- if none of above condition(x>3 or x<3) s
        print('The number is equal to 3')
else: # else- if none of above condition(r == 0) satis
    print('Odd Number')
```

Odd Number

for above program as 3 is a odd number r=1 it will skip the first if statement and jump to else and print 'Odd Number'. as it haven't go through nested if conditional statement it will not check if it is < or > or = 3 and will never print 'The number is equal to 3'. writing this cell is of no use