Example:

```
# Using nested if find maximum of 3 numbers

a=int(input("Enter First Number "))
b=int(input("Enter Second Number "))
c=int(input("Enter Third Number "))
if a>b:
    if a>c:
        print(f'{a} is max')
    else:
        print(f'{c} is max')
elif b>a:
    if b>c:
        print(f'{b} is max')
    else:
        print(f'{c} is max')
elif c>a:
    if c>b:
       print(f'{c} is max')
    else:
        print(f'{b} is max')
```

Output

```
Enter First Number 400
Enter Second Number 200
Enter Third Number 100
400 is max

Enter First Number 100
Enter Second Number 100
Enter Third Number 200
200 is max
```

Example:

```
# Write a program to find input year is leap or not

year=int(input("Enter any year "))

# century years in a 400-year period
if year%400==0 and year%100==0:
```

```
    print(f'{year} is leap')
# Every 4 years not century years
elif year%4==0 and year%100!=0:
    print(f'{year} is leap')
else:
    print(f'{year} is not leap')
```

Output

```
Enter any year 2004
2004 is leap

Enter any year 2000
2000 is leap
```

Example:

```
# Write a program to find input year is leap or not

year=int(input("Enter any year "))

if year%4==0:
    if year%100==0:
        if year%400==0:
            print(f'{year} leap year')
        else:
            print(f'{year} not leap year')
    else:
        print(f'{year} is leap year')
else:
    print(f'{year} is not leap')
```

Output

```
Enter any year 1600
1600 leap year

Enter any year 2008
2008 is leap year

Enter any year 2021
2021 is not leap
```

Example:

```
# Banking application
# Withdraw,deposit

accno=int(input("AccountNo :"))
balance=float(input("Balance :"))
ttype=input("Transaction Type :")
if ttype=="deposit":
    amt=int(input("Amount to Deposit :"))
    balance=balance+amt
    print(f'Avaliable Balance {balance}')
elif ttype=="withdraw":
    amt=int(input("Amount to Withdraw :"))
    if amt>balance:
        print("Insuff Balance")
    else:
        balance=balance-amt
        print(f'Available Balance {balance}')
else:
    print("Invalid Transaction Type")
```

Output

```
AccountNo :12345
Balance :50000
Transaction Type :withdraw
Amount to Withdraw :90000
Insuff Balance

AccountNo :123
Balance :45000
Transaction Type :withdraw
Amount to Withdraw :20000
Available Balance 25000.0

AccountNo :101
Balance :45000
Transaction Type :transfer
Invalid Transaction Type
```

match statement

“match” is a conditional control statement (OR) selection statement
“match” is a soft keyword in python.

```
>>> import keyword
>>> keyword.softkwlist
['_', 'case', 'match', 'type']
```

What is difference between keywords and soft keywords?

Keywords	**Soft Keywords**
Keywords cannot used as identifiers	Soft keywords can be used as identifiers
Keywords are 35	Soft keywords are 4 1. _ 2. match 3. case 4. type

“match” statement is introduced in python 3.10 version
This match statement is similar to **switch..case** in C,C++ and Java programming languages
Match statement is used to compare a given value with list of values.

Syntax:

```
match(variable/expression):
    case <value>:
         statement1
    case <value>:
      statement-2
  case <value>:
     statement-3
  …
   case _:
      statement-x
```

match statement read the value of variable and compare with each case, if value equal to given case value, it execute that block.
If not match with any case, it execute default case which defined with _

Example:

```
print("1.Python")
print("2.Java")
print("3.C++")
print("4.Oracle")
print("5.Exit")
opt=int(input("Enter Your Option "))
match(opt):
    case 1:
        print("Python Fee 6000")
    case 2:
        print("Java Fee 3000")
    case 3:
        print("C++ Fee 1000")
    case 4:
        print("Oracle Fee 2000")
    case 5:
        print("Thank using Enq Sys")
    case _:
        print("Invalid Option Try Again")
```

Output

```
1.Python
2.Java
3.C++
4.Oracle
5.Exit
Enter Your Option 4
Oracle Fee 2000

1.Python
2.Java
3.C++
4.Oracle
5.Exit
Enter Your Option 5
Thank using Enq Sys

1.Python
2.Java
3.C++
```

4.Oracle
5.Exit
Enter Your Option 9
Invalid Option Try Again

Example:

```
print("Finding Area")
print("============")
print("1.Circle ")
print("2.Triangle")
print("3.Rectangle")
print("4.Exit")
opt=int(input("Enter Your Option "))
match(opt):
    case 1:
        r=float(input("Enter Radious of Circle "))
        area=3.147*r*r
        print(f'Area is {area:.2f}')
    case 2:
        b=float(input("Enter Base of Triangle "))
        h=float(input("Enter Height of Triangle "))
        area=0.5*b*h
        print(f'Area is {area:.2f}')
    case 3:
        l=float(input("Enter L value of Rect"))
        b=float(input("Enter B value of Rect"))
        area=l*b
        print(f'Area is {area:.2f}')
    case 4:
        print("Bye")
    case _:
        print("Invalid option")
```

Output

```
Finding Area
============
1.Circle
2.Triangle
3.Rectangle
4.Exit
```

```
Enter Your Option 3
Enter L value of Rect1.5
Enter B value of Rect2.0
Area is 3.00

Finding Area
============
1.Circle
2.Triangle
3.Rectangle
4.Exit
Enter Your Option 4
Bye
```