

Experiment No : 02

Aim : Write python programs to understand Control flow statements: Conditional statements (if, if...else, nested if)

Description :

In programming languages, most of the time in large projects we have to control the flow of execution of our program and we want to execute some set of statements only if the given condition is satisfied, and a different set of statements when it's not satisfied.

Conditional statements are also known as decision-making statements. We need to use these conditional statements to execute the specific block of code if the given condition is true or false.

In Python we can achieve decision making by using the following statements:

- if statements
- if-else statements
- elif statements
- Nested if and if-else statements

Implementation :

```
#if, if...else, nested if
```

```
#if else
```

```
a=10
```

```
b=20
```

```
# if else keywords
```

```
if a<b:
```

```
    print("a is less than b")
```

```
elif a>b:
```

```
    print("a is less than b")
```

```
a=10
```

```
b=20
```

```
if a>b:
```

```
    print("a is less than b")
```

```
elif a<b:
```

```
    print("yes")
```

```
a=10
```

```
b=20
```

```
if a<b:
```

```
    print("a is less than b")
```

```
elif a<b:
```

```
    print("yes")
```

```
else:
```

```
    print("no")
```

```
a=10
```

```
b=20
```

```
if a>b:
```

```
    print("a is less than b")
```

```
elif a==b:
```

```
    print("yes")
```

```
else:
```

```
print("no")  
a=10  
b=20  
if a>b:  
    print("a is less than b")  
elif a<b:  
    print("yes")  
else:  
    print("no")
```

```
a=10  
b=20  
#only one statement in execution (if)  
if a<b: print("a is less than b")
```

```
# if and else  
print("a is less than b") if a==b else print("yes")  
if a<b and a>5:  
    print("yes")  
else:  
    print("no")
```

```
a=10  
b=20
```

```
if a<b or a<5:
```

```
    print("yes")
```

```
else:
```

```
    print("no")
```

```
#nested if
```

```
a=10
```

```
b=20
```

```
if a>5:
```

```
    print("above 5")
```

```
if a>20:
```

```
    print("and also above 20")
```

```
else:
```

```
    print("but not above 20")
```

```
a=10
```

```
b=20
```

```
if a>5:
```

```
    print("above 5")
```

```
if a<20:
```

```
    print("and also above 20")
```

```
else:
```

```
    print("but not above 20")
```

Output :

```
Command Prompt
Microsoft Windows [Version 10.0.19043.1526]
(c) Microsoft Corporation. All rights reserved.

C:\Users\LENOVO>cd desktop

C:\Users\LENOVO\Desktop>exp2.py
'exp2.py' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\LENOVO\Desktop>exp2.py
a is less than b
yes
a is less than b
no
yes
a is less than b
yes
yes
yes
above 5
but not above 20
above 5
and also above 20

C:\Users\LENOVO\Desktop>
```

Conclusion : Therefore we have successfully implemented and understood the Control flow statements: Conditional statements (if, if...else, nested if).