

```

# Decision Control
# 1. Simple If
"""
Syntax:
if <condition>:
    Body
"""
num = 10
if num > 0:
    print("Number is Greater than Zero")
    print("Inside If 1")
    print("Inside If 2")
    print("Inside If 3")
print("Line 14")

# Example:

age = 20
if age > 18:
    print("Candidate is eligible for voting")

available_balance = 300
minimum_balance = 500
if available_balance < minimum_balance:
    print("Warning: Low Funds")
"""

# 2. If Else
"""
Syntax:
if <condition>:
    Body if condition is True
else:
    Body if condition is False
"""

# Example:
"""
num = 10
if num >= 0:
    print("Number is Positive")
else:
    print("Number is Negative")
print("Line 46")

age = 20
if age >= 18:
    print("Candidate is Eligible to Vote")
else:
    print("Candidate is not Eligible to Vote")

withdrawl_amount = 500
current_balance = 1000
# if current_balance >= withdrawl_amount:
if withdrawl_amount <= current_balance:

```

```

        print("Funds Transferred Successfully")
        current_balance -= withdrawl_amount # current_balance = current_balance -
withdrawl_amount
        print("Current Balance is : ", current_balance)
    else:
        print("Insufficient Funds!!!")
"""

```

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# 3. elif Ladder
# Else Block is Optional
# Syntax:
# if <condition 1>:
#     Statements 1
# elif <condition 2>:
#     Statements 2
# elif <condition 3>:
#     Statements 3
# .....
# .....
# .....
# else:
#     Statements X

```

```

# Example:
"""

```

```

num = 10
if num > 0:
    print("Number is Positive")
elif num < 0:
    print("Number is Negative")
else:
    print("Number is Zero")

num = 10
if num == 10:
    print("Number is Equal to 10")
elif num == 20:
    print("Number is Equal to 20")
elif num > 0:
    print("Number is Greater than 0")
elif num == 0:
    print("Number is Equal to 0")
elif num > 5:
    print("Number is Greater than 5")
print("Line 103")

```

```

num = 100
if num == 10:
    print("Number is Equal to 10")
elif num == 20:
    print("Number is Equal to 20")
elif num == 30:
    print("Number is Equal to 30")
elif num == 40:
    print("Number is Equal to 40")
else:
    print("None of the above conditions are True")
"""

```

4. Match (Switch) Statement

1. Match statement is used for code readability.

2. There is an optional _ case which will execute if the value doesn't match with any of the above values.

Syntax:

"""

```
match <variable_name>:
    case value1:
        # Statement Set1
    case value2:
        # Statement Set2
    case value3:
        # Statement Set3
    ....
    ....
    case _:
        # Statement Setn
```

a = 50

```
match a:
    case 1:
        print("a value is 1")
    case 2:
        print("a value is 2")
    case 3:
        print("a value is 3")
    case 4:
        print("a value is 4")
    case 5:
        print("a value is 5")
    case _:
        print("a value is either less than 1 or greater than 5")
"""
```

Pass Statement

1. Pass Statement is an empty statement used to avoid the indentation errors.

2. In real world, sometimes we may want to skip the block of code or may want to write the block after some time.

So, in such cases, to prevent the indentation error, we use the pass statement

3. Pass statement can be used with Decision Control, loops, functions, classes, Exceptions, etc.,

if True:

pass

print("Line below the if block")

a = 8 + 5 * 3

print(a) # 23

In the above case, multiplication will be executed first.

But, If we want addition to be executed first,

We modify the above statement as:

a = (8 + 5) * 3

print(a)

Operator Precedence

#1. When there are multiple operators in an expression,
the operators with the highest precedence will be executed first.
This is called operator precedence.

```
a = 8 * 4 + 5 - 1 >> 2
# 1. Left to right
a = (((8 * 4) + 5) - 1) >> 2
# Evaluation:
# a = ((32 + 5) - 1) >> 2
# a = (37 - 1) >> 2
# a = 36 >> 2
# a = 9
print(a)
```

Nested Decision Control
1. Decision Control inside Decision Control is known as Nested Decision Control
Syntax:

```
"""
if <condition1>:
    if <condition2>:
        # Statements 1
    else:
        # Statements 2
else:
    if <condition3>:
        # Statements 3
    else:
        # Statements 4
"""

"""
a = 10
if a > 0:
    if a == 10:
        print("a value is 10")
    else:
        print("a is positive but not equal to 10")
    print("Line 213")
elif a < 0:
    if a == -10:
        print("a value is -10")
    else:
        print("a is negative but not equal to -10")
    print("Line 219")
else:
    print("a value is 0")
    print("Line 222")
print("Statement outside elif")

```

```
num = 10
if num == 10:
    print("Number is equal to 10")
    print("Line 2")
    print("Line 3")
    print("Line 4")
    print("Line 5")
    print("Line 6")

```

```

else:
    print("Number is not equal to 10")
    print("Line 2")
    print("Line 3")
    print("Line 4")
    print("Line 5")
    print("Line 6")
"""

nationality = "Indian"
locality = "KPHB"
age = 25
if nationality == "Indian":
    if locality == "KPHB":
        if age >= 18:
            print("Candidate is eligible to vote")
        else:
            print("Candidate is minor")
    else:
        print("Candidate locality is different")
else:
    print("Only Indians can vote or (NRI's) can vote")

if (nationality == "Indian") and (locality == "KPHB") and (age >= 18):
    print("Candidate is eligible to vote")
else:
    print("Candidate is not eligible to vote")

```