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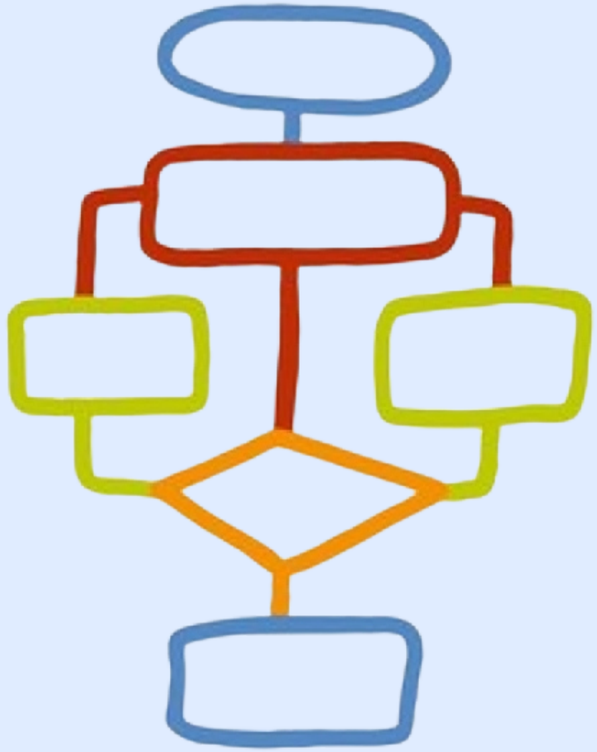

CSE 120 - PYTHON PROGRAMMING

SEMINAR ON CONDITIONAL STATEMENTS

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INTRODUCTION

- In conditional statements a hypothesis is followed by a conclusion
- A conditional statement is used to determine whether a certain condition exists before code is executed.
- Conditional statements are used for comparing operators (e.g. equal to ==, less than <) to check the value of a variable against some other value or variable.

IMPORTANCE OF CONDITIONAL STATEMENT

- IF you watch this presentation carefully ,then you can definitely understand the topic.
- ELSE you will not be able to understand the topic.

TYPES OF CONDITIONAL STATEMENTS

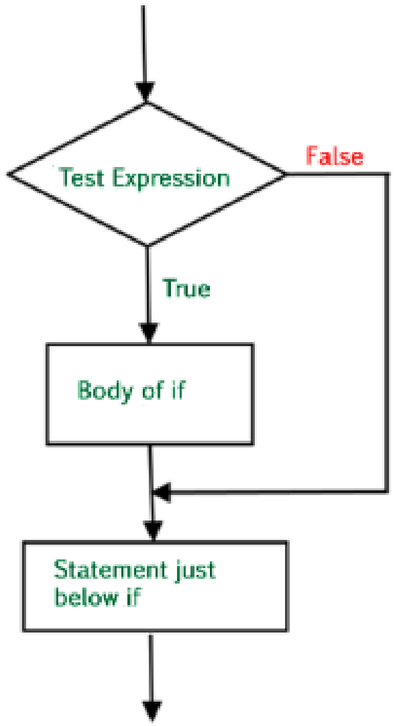
IF

IF ELSE

ELIF

NESTED IF

CONDITIONAL STATEMENT – IF



- IF statement is the most simple decision making statement.
- It is used to decide whether a certain statement or block of statements will be executed or not i.e if a certain condition is true then a block of statement is executed otherwise not.
- if (condition):
  # Statements to execute if

CONDITIONAL STATEMENT – IF

CODE

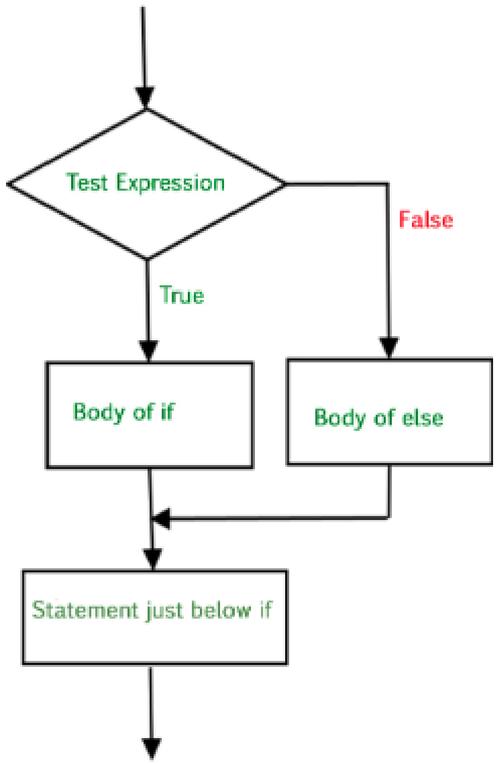
```
1   x = 10
2   y = 20
3   if x > y:
4       print("x is greater than y")
5   if y > x:
6       print("y is greater than x")
7   print("x value:", x)
8   print("y value:", y)
9
```

OUTPUT

```
D:\SRET\FirstYear\PythonProgramming\Seminar\Code>python IF.py
y is greater than x
x value: 10
y value: 20

D:\SRET\FirstYear\PythonProgramming\Seminar\Code>
```

CONDITIONAL STATEMENT IF ELSE



- We can use the else statement with if statement to execute a block of code when the condition is false.

- ```
  if (condition):
      # Executes this block if
      # condition is true
  else:
      # Executes this block if
      # condition is false
  ```
  ```

CONDITIONAL STATEMENT – IF ELSE

CODE

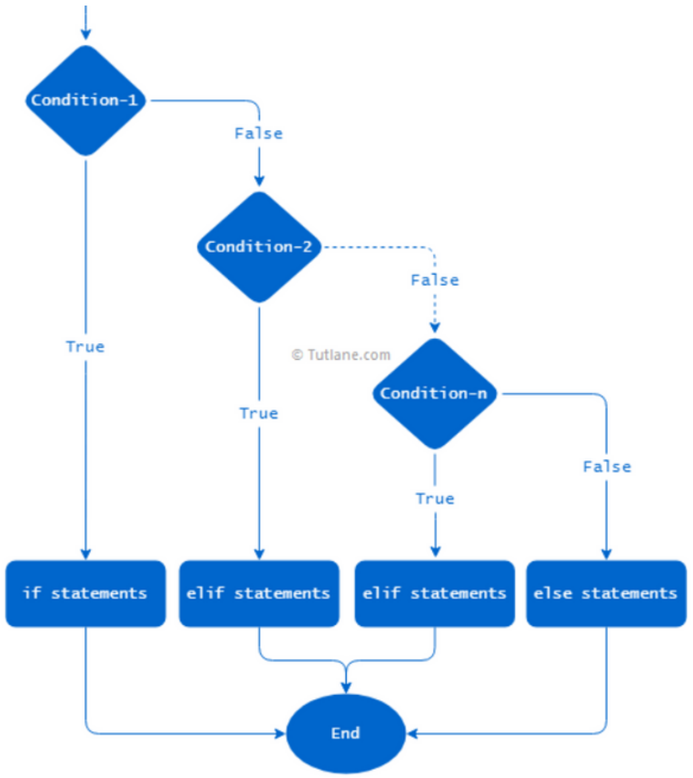
```
1   x = 10
2   y = 20
3   if x > y or x == y:
4       print(x,"is greater than or equal",y)
5   else:
6       print(y,"is greater than",x)
7
8
```

OUTPUT

```
D:\SRET\FirstYear\PythonProgramming\Seminar\Code>python "IF ELSE.py"
20 is greater than 10

D:\SRET\FirstYear\PythonProgramming\Seminar\Code>
```

CONDITIONAL STATEMENT ELIF



- ELIF keyword is a short form of else-if and it useful to define multiple conditional expressions between if and else statements.

- In the if-elif-else statement, only one if and else blocks are allowed, but you can add multiple elif blocks based on your requirements.

- ```
  if boolean_expression1:
      statement(s)
  elif boolean_expression2:
      statement(s)
  elif boolean_expression3:
      statement(s)
  else:
      statement(s)
  ```
  ```

CONDITIONAL STATEMENT – ELIF

CODE

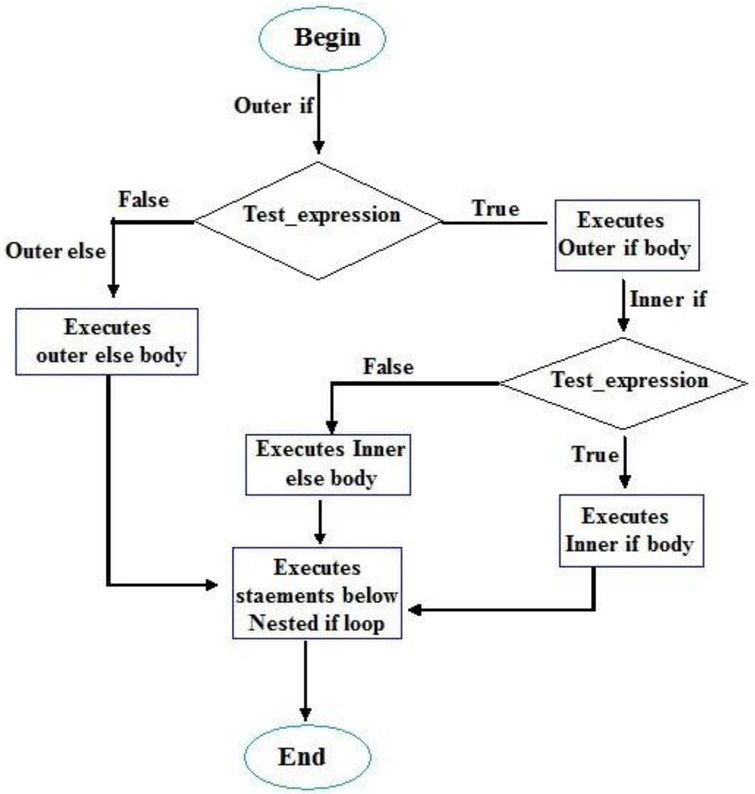
```
1   x = 30
2   y = 50
3   if x > y:
4       print(x,"is greater than",y)
5   elif y > x:
6       print (y,"is greater than",x)
7   else:
8       print("Equal")
```

OUTPUT

```
D:\SRET\FirstYear\PythonProgramming\Seminar\Code>python ELIF.py
50 is greater than 30

D:\SRET\FirstYear\PythonProgramming\Seminar\Code>
```

CONDITIONAL STATEMNET - NESTED IF ELSE



- Nested IF statement, meaning one IF statement inside of another, allows us to test multiple criteria and increases the number of possible outcomes

- if boolean_expression:
    if boolean_expression:
        statement(s)
    else:
        statement(s)
  else:
    statement(s)

CONDITIONAL STATEMENT – NESTED IF

CODE

```
x = 30
y = 10
if x >= y:
    print(x,"is greater than or equals to",y)
    if x == y:
        print(x,"is equal to",y)
    else:
        print(x,"is greater than",y)
else:
    print(x,"is less than",y)
```

OUTPUT

```
D:\SRET\FirstYear\PythonProgramming\Seminar\Code>python "NESTED IF ELSE.py"
30 is greater than or equals to 10
30 is greater than 10

D:\SRET\FirstYear\PythonProgramming\Seminar\Code>
```

QUESTION TIME

Age Finder

Write a Program to guess the age of the user using if else statement at a maximum of six chances i.e. with a maximum of six guesses you have to find the age of the user.

Constraints

0 <= Age <= 100

Hint

Use For loop to identify whether guessed age is greater/lesser than his/her age continuously

Thank you!