



SNS COLLEGE OF ENGINEERING
Kurumbapalayam (Po), Coimbatore – 641 107

An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



DEPARTMENT OF CSE



19IT103 – COMPUTATIONAL THINKING AND PYTHON PROGRAMMING

- ❖ A readable, dynamic, pleasant, flexible, fast and powerful language

UNIT III - CONTROL FLOW, FUNCTIONS, STRINGS

Conditionals: Boolean values and operators, conditional (if), alternative (if-else), chained conditional (if-elif-else); Iteration: state, while, for, break, continue, pass; Fruitful functions: return values, parameters, local and global scope, function composition, recursion; Strings: string slices, immutability, string functions and methods, string module; Lists as arrays. Illustrative programs: square root, gcd, exponentiation, sum an array of numbers, linear search, binary search.

3.1 Conditionals

3.1.1 Boolean Values and Operators

- A Boolean expression is an expression that is either **true** or **false**.
- Converting Boolean to integer, the value is always **0** for false and **1** for true
- Converting integer to Boolean, the value is True for all integers except zero
- Python type is **bool**.

3.1 Conditionals

3.1.1 Boolean Values and Operators

Boolean Expression	Meaning
$x \neq y$	x is not equal to y
$x > y$	x greater than y
$x < y$	x less than y
$x \leq y$	x less than or equal to
$x \geq y$	x greater than or equal to

3.1 Conditionals

3.1.1 Boolean Values and Operators

and Operator:

Op1	Op2	Op1 and Op2
TRUE	TRUE	TRUE
TRUE	FALSE	FALSE
FALSE	TRUE	FALSE
FALSE	FALSE	FALSE

3.1 Conditionals

3.1.1 Boolean Values and Operators

or Operator:

Op1	Op2	Op1 or Op2
TRUE	TRUE	TRUE
TRUE	FALSE	TRUE
FALSE	TRUE	TRUE
FALSE	FALSE	FALSE

3.1 Conditionals

3.1.1 Boolean Values and Operators

Example 1: “and” operator

```
print("Enter Month and Day")
month=input()
day=int(input())
if(month=="january" and day==26):
    print("republic day")
elif(month=="august" and day==15):
    print("independence day")
elif(month=="october" and day==2):
    print("Gandhi Jayanthi")
else:
    print("invalid input")
```

Output:

```
Enter Month and Day
august
15
independence day
>>> |
```

3.1 Conditionals

3.1.1 Boolean Values and Operators

Example 1: “or” operator

```
import sys
month=input("Enter the month to display number of days: ")
if(month=="may" or month=="july" or month=="august"):
    print ("31")
elif(month=="jun"):
    print ("30")
else:
    print ("invalid")
```

Output:

```
Enter the month to display number of days: may
31
```


THANK YOU

A yellow speech bubble with a pointed tail at the bottom right, set against a blue background. The words "THANK YOU" are cut out of the bubble in a bold, sans-serif font, revealing the blue background behind them.