

Logical

- Logical operators use to write compound conditions

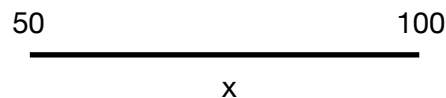
AND

- Lets take example - cond1 and cond2
- If the cond1 and cond2 both are **true** than it will return true value

True - 1

False - 0

- AND is like multiplication and it is useful to check the range of values



If $x \geq 50$ and $x \leq 100$

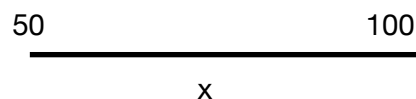
- Lets take an example about subjects (maths , phy , and chem) where above 45 will be the passing marks

```
if math>=45 and phy >=45 and chem >=45 :  
    print ("pass")  
else :  
    print (" fail ")
```

- AND is use to check this type of conditions where everything must be true (both conditions should be true)

OR

- If the cond1 or cond2 both are false returns **false**
- OR is like addition



- OR is useful to check outside the range

```
if x <= 50 or x >=100 :
```

NOT

- It will negate it
- Returns the opposite value (If its true returns false if its false return true)
- It is not commonly used