





# ممم جداً

هذا الملف للمراجعة السريعة واخذ الملاحظات عليه فقط ،لانه يحتوي على اقل من 20٪ مما يتم شرحه في الفيديوهات الاستعجال والاعتماد عليه فقط سوف يجعلك تخسر كميه معلومات وخبرات كثيره

يجب عليك مشاهدة فيديو الدرس كاملا

لاتنسى عمل لايك ومشاركة القناة لتعم الفائدة للجميع لا تنسونا من دعائكم

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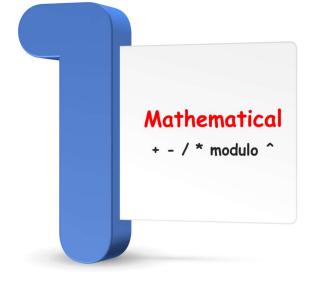
**Mohammed Abu-Hadhoud** 







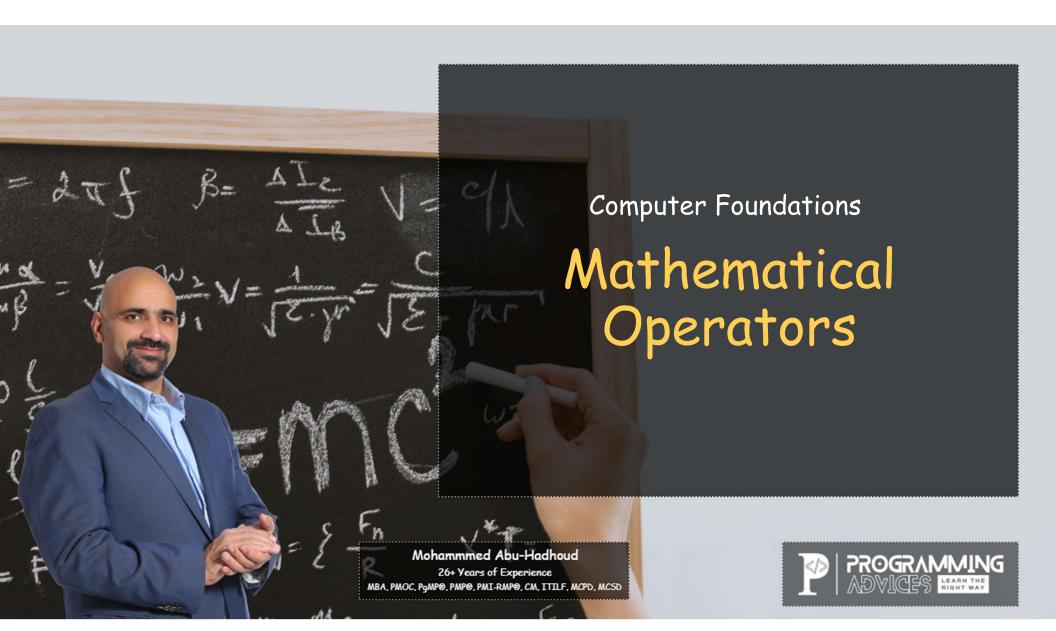
# Operator Types







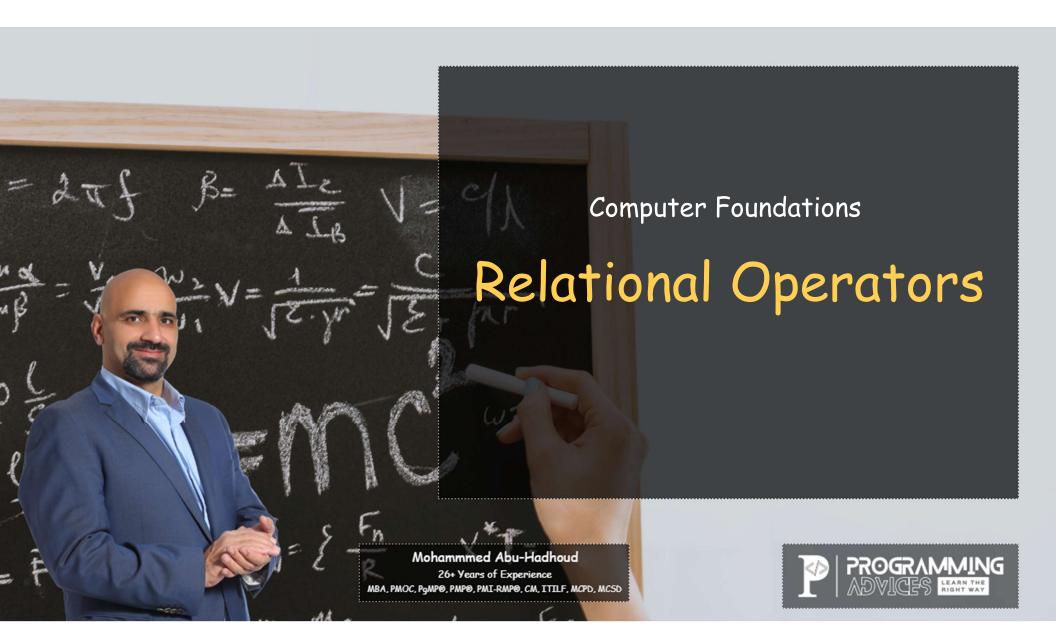




### Mathematical Operators

| Operator         | Computer Symbol | Exam      | ple     |
|------------------|-----------------|-----------|---------|
|                  |                 | Operation | Results |
| Addition         | +               | 3.0 + 4.2 | 7.2     |
| Subtraction      | -               | 8.5 - 4.0 | 4.5     |
| Multiplication   | *               | 5 * 5     | 25      |
| Integer Division | /               | 10 / 5    | 2       |
| Modulo Division  | Mod             | 9 Mod 4   | 1       |
| Power            | ^               | 3^2       | 9       |

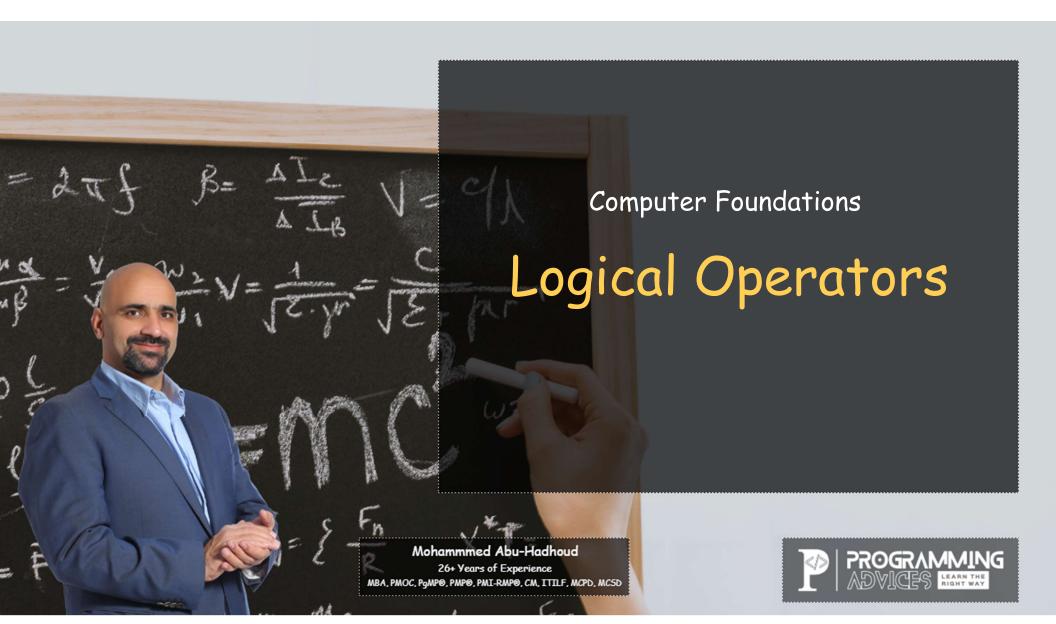


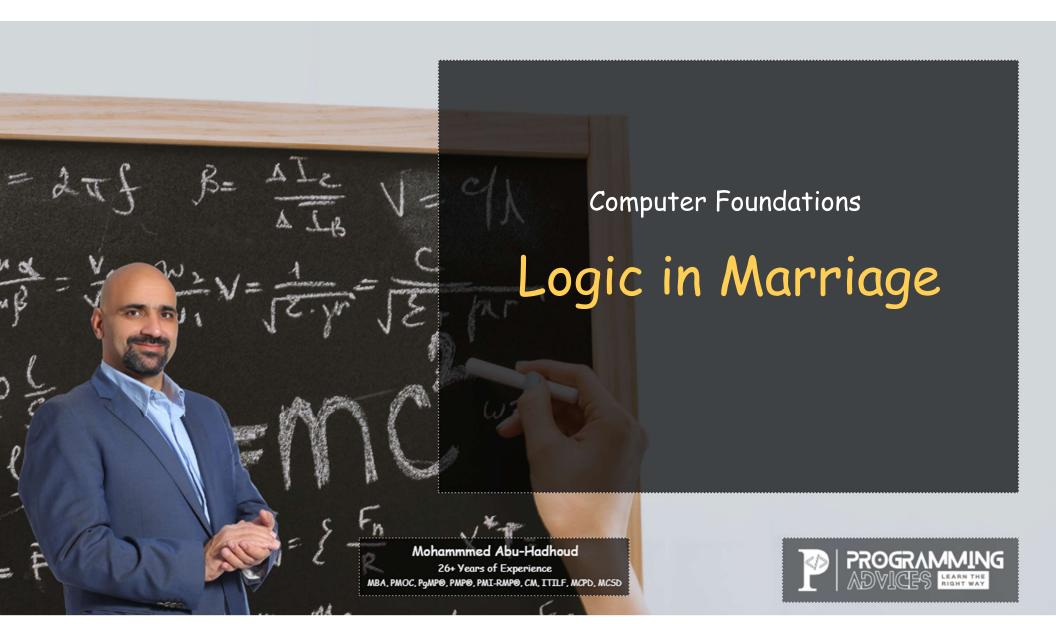


## Relational Operators

| Operator                | Computer Symbol | Exc             | ample   |
|-------------------------|-----------------|-----------------|---------|
|                         |                 | Operation       | Results |
| Equal to                | =               | 5 = 7           | False   |
| Less than               | <               | 5 < 7           | True    |
| Grater than             | >               | 5 <b>&gt;</b> 7 | False   |
| Less than or equal to   | <=              | 5 <= 7          | True    |
| Grater than or equal to | >=              | 5 >= 7          | False   |
| Not equal to            | <b>&lt;&gt;</b> | 5 <b>~</b> 7    | True    |







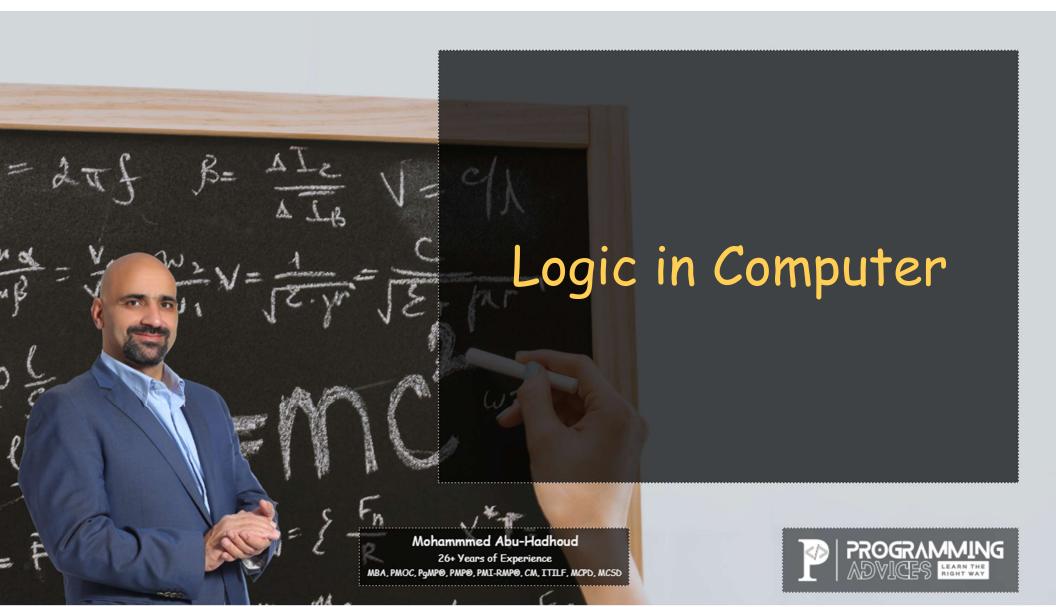
Logic in Marriage Life

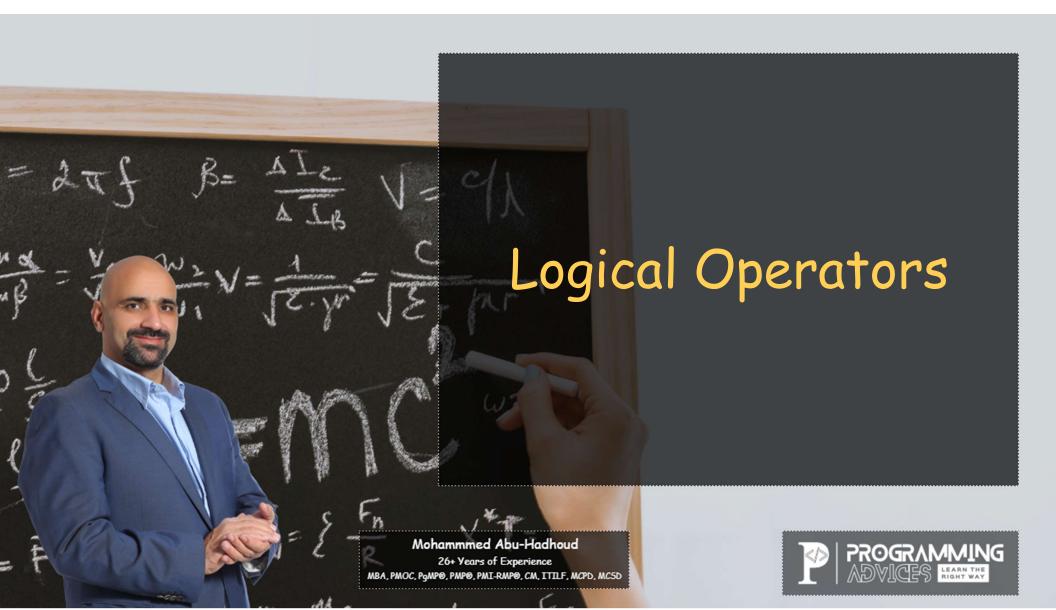
| 9 |  |
|---|--|
|   |  |
|   |  |
|   |  |
|   |  |

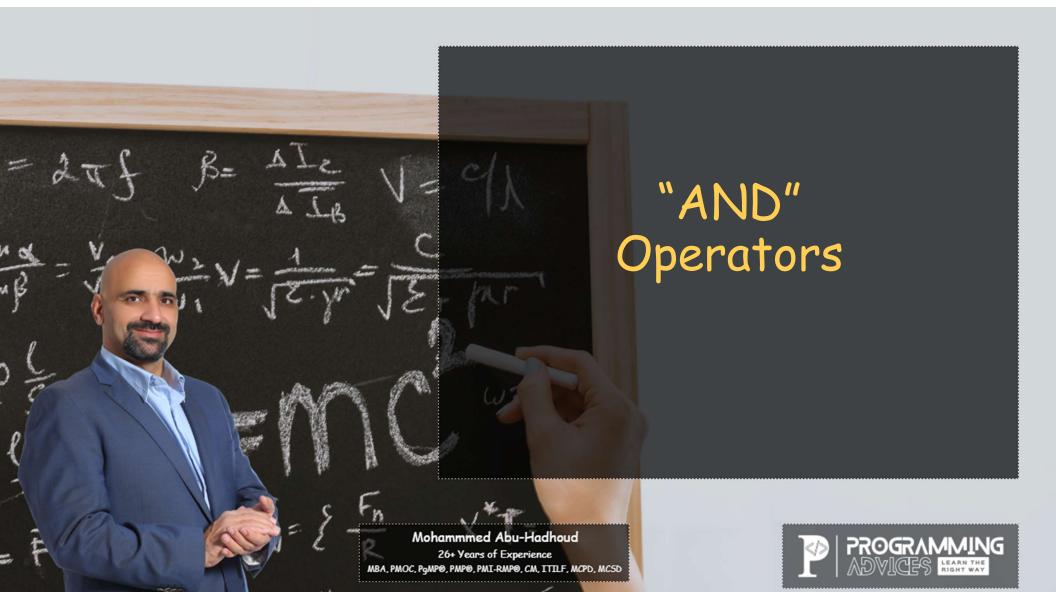


| Husband | Wite  | Result |
|---------|-------|--------|
| True    | False | True   |
| True    | True  | True   |
| False   | True  | True   |
| False   | False | True   |







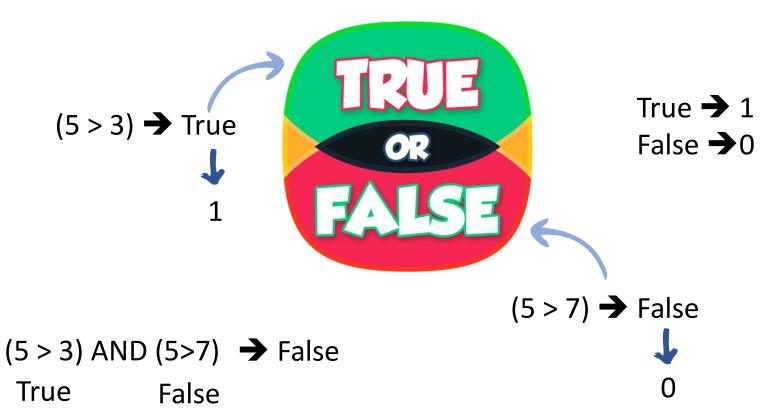


# Logical Operators

| Operator | Computer Symbol | Exam          | ple     |
|----------|-----------------|---------------|---------|
|          |                 | Operation     | Results |
| And      | AND             | True AND True | True    |
| Or       | OR              | True OR False | True    |
| Not      | NOT             | NOT True      | False   |



#### Logical Operators





#### Practical Example to learn "AND" operator:

IF you wan to get hired you have to have all the following conditions:

- 1. Your Age must be >= 21 years
- 2. You should have a driver license.

This in computer means:

(Age>=21 AND HasDriverLicesne=True) Then will be hired



#### Logical "AND" Operator:

| Condition A      | Condition B        | A AND B |
|------------------|--------------------|---------|
| Age              | Has Driver License |         |
| 25 >= 21 → True  | Yes → True         | True    |
| 25 >= 21 → True  | No → False         | False   |
| 19 >= 21 → False | Yes → True         | False   |
| 19 >= 21 → False | No→ False          | False   |



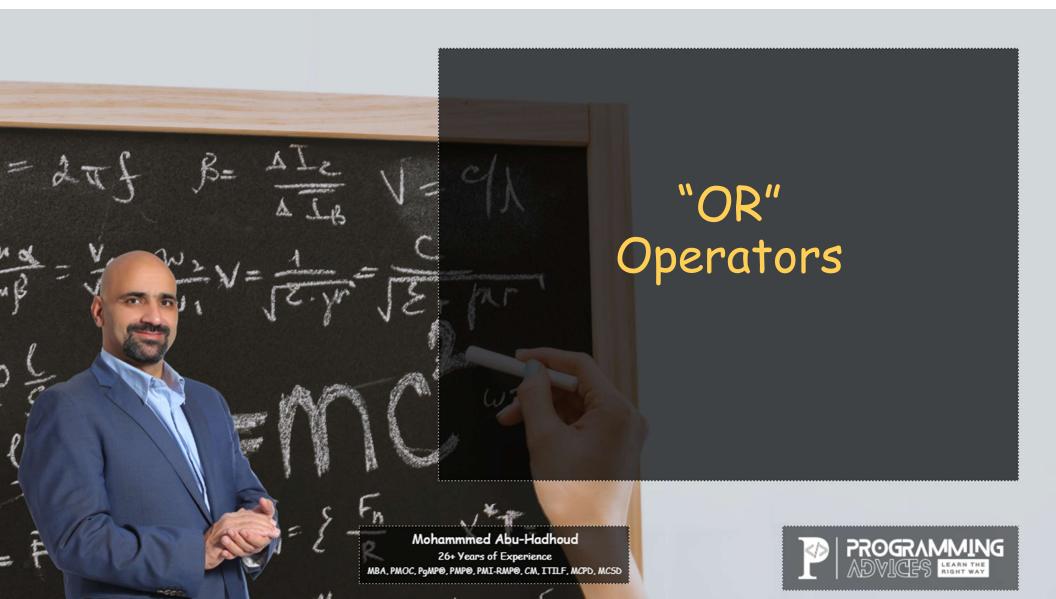
#### AND

# Any "False" in AND the result is False

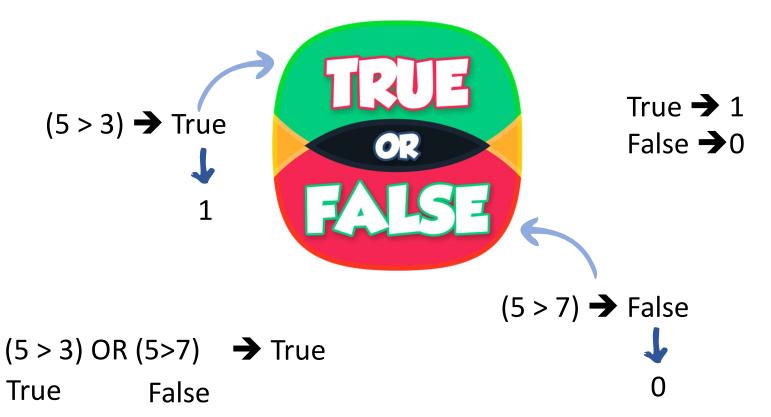
| A     | В     | A AND B |
|-------|-------|---------|
| True  | True  | True    |
| True  | False | False   |
| False | True  | False   |
| False | False | False   |

| A | В | A AND B |
|---|---|---------|
| 1 | 1 | 1       |
| 1 | 0 | 0       |
| 0 | 1 | 0       |
| 0 | 0 | 0       |





#### Logical "NOT" Operators





#### Practical Example to learn "OR" operator:

IF you wan to get hired you have to have at least One the following conditions:

- 1. Your Age must be >= 21 years
- 2. You should have a driver license.

This in computer means:

(Age>=21 OR HasDriverLicesne=True) Then will be hired



#### Logical "OR" Operator:

| Condition A      | Condition B        | A OR B |
|------------------|--------------------|--------|
| Age              | Has Driver License |        |
| 25 >= 21 → True  | Yes → True         | True   |
| 25 >= 21 → True  | No → False         | True   |
| 19 >= 21 → False | Yes → True         | True   |
| 19 >= 21 → False | No→ False          | False  |

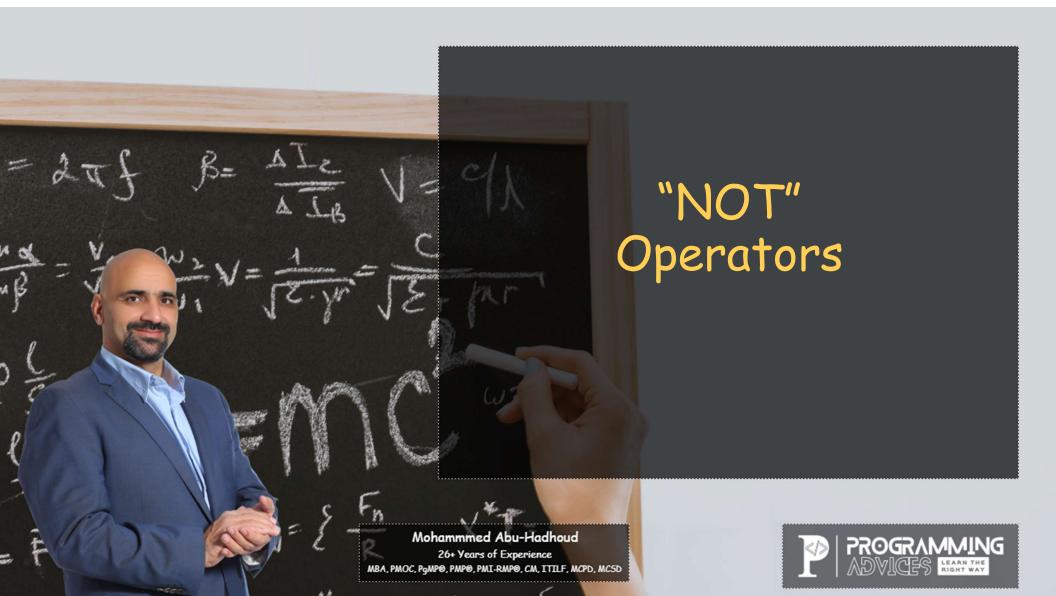


#### OR

# A B A OR B True True True True False True False True False False False

# Any "True" in OR the result is True

| A | В | A OR B |
|---|---|--------|
| 1 | 1 | 1      |
| 1 | 0 | 1      |
| 0 | 1 | 1      |
| 0 | 0 | 0      |

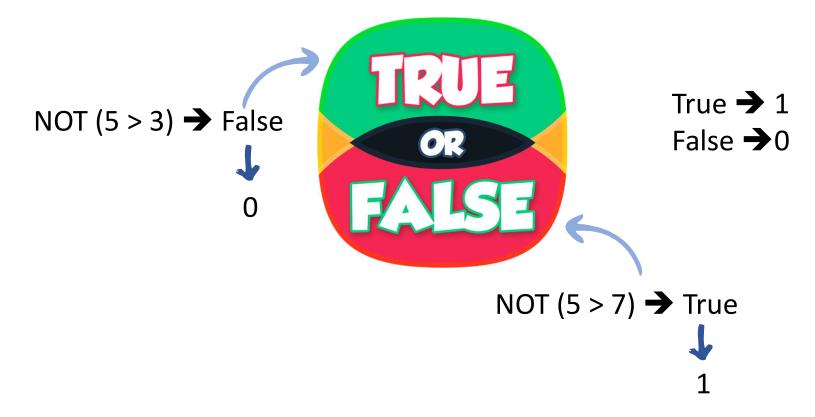


## Logical "NOT" Operator:

| Condition A | NOT A |
|-------------|-------|
|             |       |
| True        | False |
| False       | True  |



#### Logical "NOT" Operators







#### Solve the following problems:

|--|

NOT (12 >=12)

1 AND 1

(7 = 7) and (7 > 5)

NOT (12 < 7)

True AND 0

(7 = 7) and (7 < 5)

8 < 6

NOT (8 < 6)

0 OR 1

(7 = 7) OR (7 < 5)

8 = 8

NOT (8 = 8)

0 OR 0

(7 < 7) OR (7 > 5)

12 <= 12

NOT (12 <= 12)

Not 0

NOT (7 = 7) and (7 > 5)

7 = 5

NOT (7 = 5)

Not (1 OR 0)

(7 = 7) and Not (7 < 5)



