# CS first exam final notes

1. You input **data** that gets processed and then turns into output as **information.**
2. Strings should be enclosed with quotes (1 quote for a single character, and 2 for more than 1 character)
3. Booleans are status indicators. they can either be **TRUE or False**
4. <> means not equal. And it's >= not =>
5. The Mod has the priority before +, -
6. Question: increment x by 3
   Answer: x= x+3 **not** x+3 alone; should be with the equal sign.
7. In a flow chart, the rectangle is for assignment statements, and the Parallelogram (متوازي أضلاع) is only for input.../ output.... / Print... Etc.
8. You sort 2 columns at the same time from the custom sort (Home ⟶ sort and filter ⟶ custom sort)
9. In advanced filtering, for a question that has **and** in it (for example >50 and is green), the 2 conditions should be in the same row

| Color | Department | Cost | Quantity | TotalValue | Month |
|-------|-----------|------|----------|-----------|-------|
| Green |           | >50  |          |           |       |

If it is or (>50 or is green), they should be in different rows

| Color | Department | Cost | Quantity | TotalValue | Month |
|-------|-----------|------|----------|-----------|-------|
| Green |           |      |          |           |       |
|       |           | >50  |          |           |       |

If it has double "ands" for the same column (>50 and <90), we copy and paste the column at the end of the row and write the second condition.

| Type | Department | Cost | Quantity | TotalValue | Month | Cost |
|------|-----------|------|----------|-----------|-------|------|
|      |           | >50  |          |           |       | <90  |

10. **EVERYTHING** that is related to a chart's properties is found by right clicking on them and going to (format….)

11. The results of the if/countif functions should be enclosed with double quotations in writing the function.

12. Mean: = average (cell range)
Standard deviation: =stdev(cell range)

13. In correlations, from -1 to -0.5 is inversely strong, -0.5 to 0 is inversely weak, 0 to 0.5 is directly weak and from 0.5 to 1 is directly strong. (Directly/Positively)

14. Test measurements rules:
    a. Sensitivity= TP/ (TP + FN)
    b. Specificity= TN/ (TN +FP)
    c. PPV = TP/ (TP+ FP)
    d. NPV= TN/ (TN + FN)
    e. Accuracy = (TP + TN)/ (TP + TN + FP + FN)

15. Pivot tables have the ground truth as columns, test results as rows, and patient numbers as values.