Excel

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 Reference: Data Science Class

*Excel Class Documentation*

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# Sort Function:

The Sort function helps us arrange our data in order.

* Sort numbers from smallest to biggest or biggest to smallest.
* Sort words in A to Z (alphabetical) or Z to A order.
* Sort by one column or multiple columns at same time.

1. Go to home and click on sort and filter.
2. Select each individual column and sort them in ascending and descending order.

# Charts

Charts helps us show data in pictures instead of just numbers.

* Use charts to understand data quickly.
* Make our work look clean and clear.
* Choose different types like bar charts, pie charts, line charts, etc.

Insert and recommended Charts.

# Pivot Table

Pivot table helps us quickly summarize big data.

# Filter Function:

Filter function helps us see only the data we need and hide the rest.

* To show specific rows based on a condition.
* It does not delete anything – it just hides the data that doesn’t match.
* We can filter by text, numbers or dates.

1. Select on columns.
2. Go to sort and filter and click on Filter.
3. When we click the arrow like-button we can see different options like this.

# Conditional Formatting:

Conditional Formatting helps us add colors to cells based on the values inside them.

* Use it to highlight important data.
* Change the color automatically when the value meets the rule.
* Makes our data easy to read and understand.

1. Click on Home Tab. Then on conditional formatting
2. Click on it, and then on New Rule.
3. Select the column in which you want to highlight the data that follows the rules and define the rules there.
4. Do hit and trial as much as you can.

# What-if Analysis

What if Analysis helps us test different ideas by changing numbers to see what might happen.

* Can try different values and see how the result changes.
* Helps us make better decision by checking different possibilities.

# Proper Function

The Proper Function helps us fix text by capitalizing the first letter of each words.

* Makes the text look neat and clean
* All other letters become small, except the first one of each word.

# Duplicate

Duplicate Highlighting helps us find repeated values in our data.

* Use it to quickly spot duplicates in a column or row.
* Colors the repeated cells, so we can easily see them.
* Helps us clean up mistakes or check for copies.

# HLOOKUP

* Use it when our data is in rows (not columns).
* It looks at top row, finds a match, then gives us a value from another row below.

HLOOKUP Syntax:

HLOOKUP(lookup\_value,table\_array,row\_index\_num,[range\_lookup])

* Lookup\_value 🡪The value we want to search for in the top row(eg. “PRODUCT3”)
* Table\_array🡪 the table range that includes the data(eg.A1:F4)
* Row\_index\_num 🡪 the row number (from the top of the table) to return the value from (eg. 2 for SALES RETURNS.3 for PROFIT MARGIN)
* [range\_lookup]🡪 Optional:
  + FALSE for exact match
  + TRUE (or leave blank) for closest match

If we want to get the profit margin of PRODUCT 3, and our table is in range A1:F4, the formula would be:

# VLOOKUP

VLOOKUP helps us find information in a table by looking down a column.

* We give it a value (like a product ID).
* It looks for that value in the first column of a table.
* Then it returns a value from the same row in another column.
  + ‘’P003‘’ 🡪 thos is what we are searching for.
  + A2:D6 🡪 this is the range of the full table (from Product id to stock.)
  + 3 🡪 we want the value from the 3rd column in the table (price).
  + FALSE 🡪 WE WANT AN EXACT MATCH ONLY.

# Goal seek Function:

Goal seek function helps us find the missing number in a formula to reach a result we want.

We tell Excel: “I want this final answer. What number should I change to get it?”

Let’s say you want the Total Revenue to be Rs. 10,000, and we want to find out what the selling price per unit should be.

* Go to Data tab.
* Click what-if Analysis 🡪 choose Goal seek
* In the Goal seek box:
  + Set cell: B4(Total Revenue)
  + To value: 10000
  + By changing cell: B2(Selling price per unit)
* Click OK

# Sum if

SUMIF helps us add numbers only for items we want.

It looks at a list, checks for a match (like “Apple”), and then adds up the numbers next to it.

# COUNTIF

COUNTIF helps us count how many times something appears in a list.

* It looks at a list.
* Checks for a condition (like “Apple”)
* And tells us how many times it shows up.

If we want to count how many times “Apple” is in the list: =COUNTIF(A2:A7,”Apple”)

# AVERAGE

Adds all numbers and divides by how many there are.

Formula: =AVERAGE(B2:B8)

# MEDIAN

Find the middle number when the values are arranged in order.

Formula: =MEDIAN(B2:B8)