

Exercise module 4 - excel

We will work on the file sales data and we extract data from that.

1 Open files

1.1 Import in excel the sales_data.csv

It must have the following columns

Country; Salesperson; Order Amount; Order Date; Order ID

2 Formatting and editing

2.1 Apply some formatting to the headers

2.2 Format the amount as currency

2.3 Format the date in format like "13 may 2017"

2.4 Add a first column with an index for each sale "ID" equal to 1,2,3... use fill. Remove the column "order ID"

3 Replacing chars

3.1 Replace "United States of America" with USA

4 Sorting and filtering

4.1 Sort the data and find the biggest sale: Report in a new worksheet

4.2 Filter the data and count by hand which salesman sold most items

5 Formulas

5.1 Add two columns for the last and first name of the vendor (use text functions). If the first name is empty, leave empty the cell for the name

[excel ITA] To check if the value of TROVA is a valid number use VAL.NUMERO

example: =VAL.NUMERO(TROVA(" ";B2)) – TRUE/VERO if B2 contains " " otherwise false/FALSO

Or use IS.ERROR o VAL.ERR

VAL.ERR (TROVA(" ";"abc")) → TRUE

[EXCEL EN] To check if the value of FIND is a valid number use ISNUMBER example: = ISNUMBER (TROVA(" ";B2)) – TRUE/VERO if B2 contains " " otherwise false/FALSO

Or use IS.ERROR o VAL.ERR

VAL.ERR (TROVA(" ";"abc")) → TRUE

- 5.2 Add a column (Earning) that computes the earning of each sale as 10% of the order amount if in the USA, 15% if in the UK. 10% and 15% must be set in a sub table starting from around position J1

Country	Earning%
UK	15%
USA	10%

- 5.3 Add cell for the VAT and add a column (VAT) equal to Order Amount * VAT (Use absolute reference) – add this column in-between two existing columns. Put VAT in a cell (for example J7)
- 5.4 Add a column that shows Corrected Earning: if the sale is in December and in the last 20 days, or it is in January for the first 10 days, the earning is increased by 3% (again use absolute reference to a cell in around K10). Use IF and AND (SE e E)
- 5.5 Add a column that shows Earning –VAT

6 Functions

- 6.1 Use SUM, AVERAGE, MIN AND MAX over each column containing numerical data and add a couple of rows at the end.
- 6.2 Count how many sales were done in USA
- 6.3 Count how many sales were bigger than the value that you put in a cell (e.g. at the end of the rows).

To compose complex conditions, you can use &. For example if the threshold amount is in cell D803, and you want to count how many values in F2:F800 are greater than D803, you can use:

=COUNTIF(F2:F800;">"&D803)

7 Conditional formatting

- 7.1 Apply some conditional formatting. For example, in yellow the sales > 1000\$

8 Use Vlookup

- 8.1 Each vendor has an office in one city:

vendor	city	state	
Buchanan	Jersey City	New Jersey	NJ
Suyama	Los Angeles	California	CA
Peacock	Indianapolis	Indiana	IN ???
Leverling	Philadelphia	Pennsylvania	PA
Dodsworth	Fresno	California	CA
Davolio	Buffalo	New York	NY
Callahan	Tulsa	Oklahoma	OK
Fuller	Virginia Beach	Virginia	VA
King	Washington	District of Columbia	DC

Add two columns city and state for each row by using the data above and the name of the vendor. Use Vlookup.

Remember order in alphabetic order the table of vendor cities.

8.2 Add a column with the initial of the vendor concatenated with _ and the name of the state

For examples: Buchanan → B_NJ

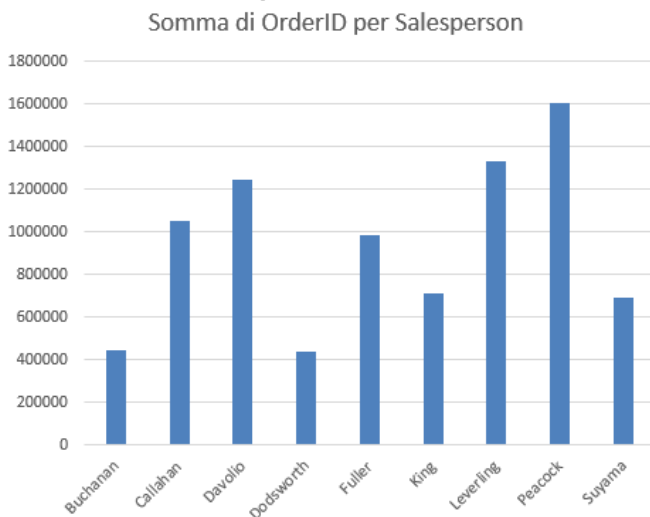
9 Pivot table

Use pivot tables to obtain the following information: (if necessary add columns)

- 9.1 Total amount sold by each vendor in USA and in UK
- 9.2 Number of sales (count) for each vendor
- 9.3 Average amount of sales by state where the vendor is from
- 9.4 Total amount of sales for month

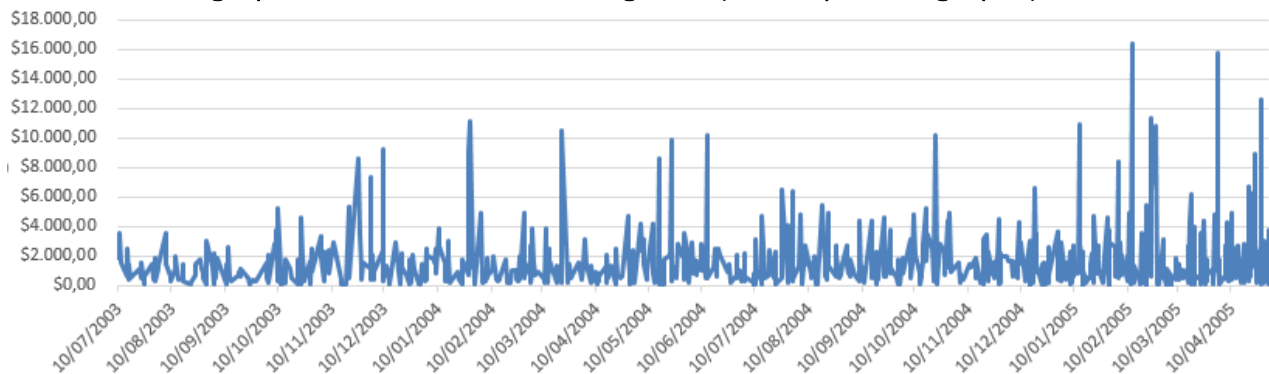
10 Graphs

10.1 Use an histogram to show the total sales for each vendor



10.2 Use an histogram to show the total sales for each state the vendors are from

10.3 Use a XY graph to show the sales during time (use dispersion graphs)



10.4 Use a pie chart to show the sales in USA and UK

11 Goal seeker

11.1 How much should be the earning increase in UK to have the same amount of earning for the USA and UK sales?

Country	Earning%
UK	15%
USA	10%



Change this

12 T-test

12.1 Let's study the t-test. Null hypothesis: each vendor sales the same amount in the USA and in the UK