Free University of Bolzano Bozen – Faculty of Economics and Management

Information Systems and Data Management 27006 exam

# Rules

* + No communication with other people or among students is allowed. Portable communication devices must be turned off. Opening any communication program on the computer is not allowed and is considered cheating.
  + You are responsible for the correct copy of your files.

Enter Windows with your login. You have 45 minutes starting from now.

Copy all the files in **\\ubz01fst\courses\exam\_coletti\YOURNAME** on your Desktop. At the end of the exam copy here only the files you are required to return, overwriting the original files you have modified.

## Exercise Excel

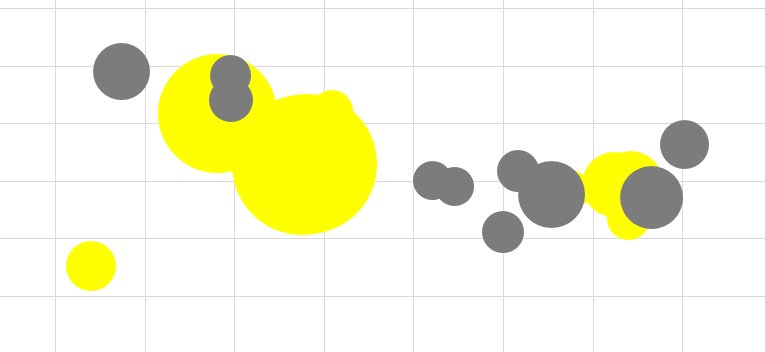
Open file **GasStations.xlsx** with Microsoft Excel 2016 and

in sheet **stations**

* fill column V with dates equal to **StartDate** (column B) advanced by exactly 3 months and 15 days;
* produce PDF file **GasStations.pdf** using landscape orientation, gridlines, headers on first line repeated on every page and using exactly one page width (as many pages long as necessary).

In sheet **averages**

* calculate the average of **Population** (column L) and **Size** (column M) from all the data in sheet **stations**;
* calculate the average of **Population** and **Size** from sheet **stations** for each **Brand** (column C);
* copy into column E the values of column **RatioPopSize** (column U) from sheet **stations**.

Using the data in sheet **Bubble**

* in an entire new sheet insert a bubble chart with **Longitude** on horizontal axis, **Latitude** on vertical axis and **Population** as bubble size, using colour yellow for the first ten *Agip Eni* stations and colour grey for the next ten *Q8* stations. *Hint: do not include the headers when selecting cells, otherwise the graph looks different.*

In a new sheet

* insert the table for a mortgage loan of 100000 € of 20 years starting on 1st January 2017 with variable interest rate and adjustable payments, supposing that the interest rate is 1% until 31st December 2023 (for 8 payments), then 3% until 31st December 2030 (for 6 payments) and then 8%.
* Insert a VBA function called **averageAbove** which accepts as input a range of cells **R** and a number **N**. It returns the average calculated on the cells in **R** that are larger than **N**.

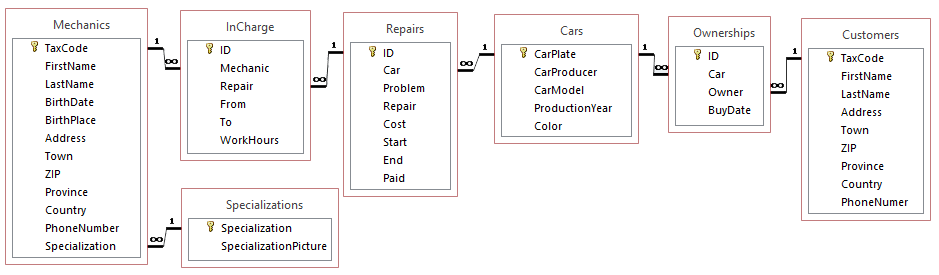
Save the file as Macro-enabled Workbook **GasStations.xlsm** or as **GasStations.xlsx** if you have skipped VBA exercise. Do it now!

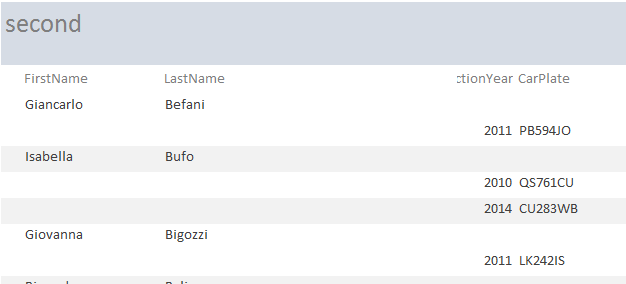
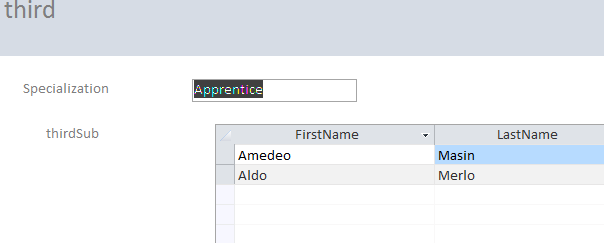
* Export sheet **stations** as **GasStations.csv** text file. Do not save Excel file again!

**TURN PAGE FOR ACCESS 🡪**

## Exercise Access

Open database **CarWorkshop.accdb** with Microsoft Access 2016 and



* create query **first** that lists the customers with their cars and the reparation’s costs and how many days the reparation lasted (use Start and End). Fields: FirstName, LastName, CarPlate, Repair’s ID, Cost, HowManyDays;
* create report **second** that displays customer by customer their cars, sorted by ProductionYear. Export the report into file **second.rtf**;
* create form **third** to edit specializations and the mechanics specialized in that sector. Lock it to avoid specializations’ deletions and modifications and mechanics’ deletions.

## Save and return:

* **GasStations.xlsm** (or **GasStations.xlsx** if you have not done VBA exercise)
* **GasStations.pdf**
* **GasStations.csv**
* **CarWorkshop.accdb**
* **second.rtf**