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.

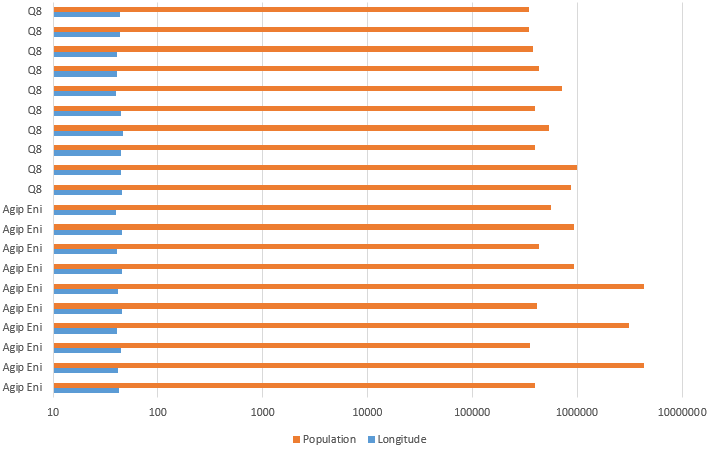
Enter Windows with your login. You have 45 minutes starting from now.

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 *NorthWest* whenever **Longitude** (column I) is larger than 43 and **Latitude** (column J) smaller than 10, otherwise with a dash;

In sheet **Bubble**

* insert in column E the values of column D multiplied by the value of cell I2 in sheet **stations**
* insert a bar chart, like the one in the picture, of **Longitude** and **Population** (not **Latitude**), with logarithmic scale starting from 10 on the horizontal axis and brands as labels;

In sheet **sensitivity**

* insert a data table to examine the variation of yearly payment when interest rate changes from 0.5% to 7.0% by steps of 0.5%.

In a new sheet

* insert the table for a mortgage loan of 100 000 € for 20 years starting on 1st January 2017 with fixed interest rate 2% and constant payments.

In another new sheet

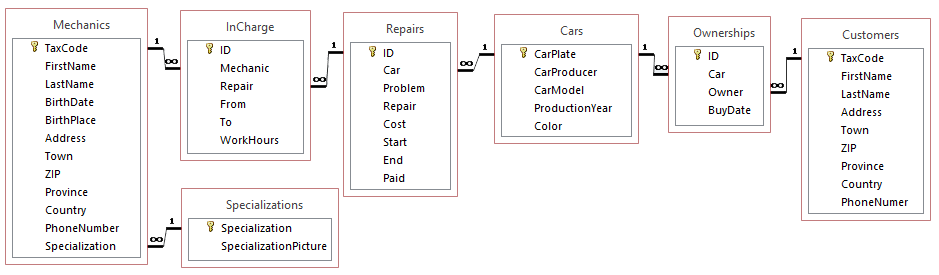
* insert a pivot table with the number of stations and the average **StartDate** (in date format) per **Province**, excluding stations with **StartDate** 2nd March 2015;
* Insert a VBA function called **checkRange** which accepts as input a range of cells **R** and a text **T**. If **T** is *count*, spelt with any capitalization, it returns the amount of cells in the range **R**, if **T** is *sum*, spelt with any capitalization, it returns the sum of the values in range **R**, otherwise it returns 0 and warns the user with an appropriate message box.

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

**TURN PAGE FOR ACCESS 🡪**

## Exercise Access

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



* create query **unpaid** that lists the reparations which are not paid, with their car’s owners and how many months have passed since the end of the reparation. Fields: FirstName, LastName, Repair’s ID, MonthsPassed;
* make the fields **Country** in tables **Mechanics** and **Customers** a field with values taken mandatorily from another table. *Do not worry about Access telling you that “Some data may be lost” and “Access encountered errors while converting the data”*;
* import sheet **stations** from file **GasStations.xlsx** or **GasStations.xlsm**, setting **ID** as primary key, **StartDate** and **Brand** as indexed fields with duplicates. *Do not worry if Access tells you* *“The first row contains some data which can’t be used for valid Access field names”*.

## Save and return:

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