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. Phones and every other means of communication 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.

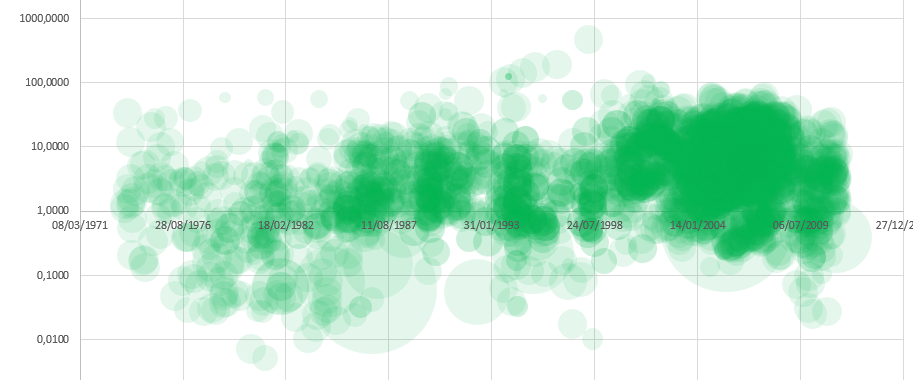
Enter Windows with your login. You have 40 minutes starting from now.

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 **capital.xlsx** with Microsoft Excel 2013 and

* in a new column insert the absolute difference between **Price** and **Price2** divided by ;
* produce a pdf file called **capital.pdf**, with landscape orientation, repeating the header’s row on every page, using only 1 page in the horizontal direction and cutting the first page after **ID**s 193 and the second page after **ID**s 399;
* ~~protect file~~ **~~capital.pdf~~** ~~preventing any opening using as password exam;~~
* in a new sheet build a bubble chart using **ExDate** on horizontal axis, **Price** on vertical axis and **Factor** as bubbles’ size. Use logarithmic scale for vertical axis and horizontal axis from 26000 to 42000, using green bubbles with transparency 90%;



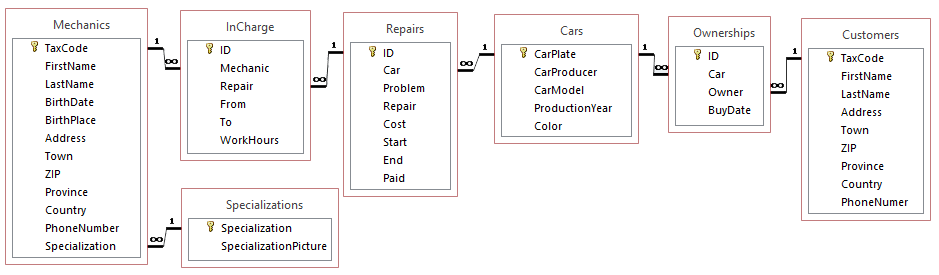
* in sheet **Sheet2** build the loan table for a mortgage loan of 100 000 € with constant payments paid back in 20 yearly payments with a constant interest rate equal to the factor of **ID** 57 in **Sheet1**;
* change the table supposing that after 10 payments (in year 2026 if you sign your loan in 2016) the interest rate becomes 5%;

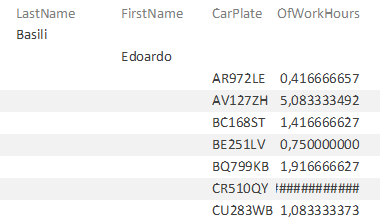
**TURN PAGE** 🡪

* in sheet **Sheet3** insert in column A values between 0,1 and 4 with steps of 0,1 and in columns B and C the logarithms in base 2 and 10 of column A;
* in the same sheet insert a mathematical graph of LOG2 and LOG10 with respect to X;
* in column E calculate the average **Factor** of **Sheet1** for rows with **Type**=1 and count how many rows have a **Price** smaller than 10;
* save your file. Change Excel decimal separator to dot. Import into a new sheet tab-delimited text file **develop.txt**;

## Exercise Access

Open database **CarWorkshop.accdb** with Microsoft Access 2013 and



* create query **query1** that displays the customers with reparations ended before today but still not paid (fields: LastName, FirstName, CarPlate, Cost; result has 17 records and some of them refer to the same car);
* build a summary query which calculates how many hours each mechanic has worked on each car and then create report **report1** that displays, mechanic by mechanic, the list of cars on which they have worked with the total working hours he spent on each car;
* modify table **Repairs** inserting a validation rule with validation text which checks that End is after Start or equal. Hint: Access will ask you whether you want to retest existing data, answer no.

## Save and return:

* **capital.xlsx**
* **capital.pdf**
* **CarWorkshop.accdb**