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 **banks.xlsx** with Microsoft Excel 2016 and

in sheet **List**

* copy the content of row 1 into sheet **CopyHere** in column A (column, not row!);
* in column N insert a date build using 15 as day, current month as month and the year of column B as year;
* copy the values of column N in sheet **Dates**, formatted as date with 2 digits year;
* from sheet **List** produce PDF file **banks.pdf** using gridlines, a footer with automatic printing date on the left and page number with total pages on the right;

In sheet **Scenario**

* fill cell B6 with an appropriate formula. Then in a new sheet insert a Scenario Summary, using appropriate labels, with at least 3 possible variations of B1:B3 variables.

In sheet **Solver**

* find the optimal non-negative amounts of each panel’s type in cells B3:E3 (highlighted in yellow) to maximize the total profit. Each unit of panel uses some resources, which have a maximum available written in green in column G.

In a new sheet

* insert the table for a mortgage loan of 50000 € of 10 years starting on 1st January 2018 with variable interest rate and adjustable payments, supposing that the interest rate is 2% until 31st December 2024 (for 7 payments), then 3% for the rest of the duration.

Insert a VBA function called **taxes** which accepts as input a number **Income** and a text **WorkType**. It returns the tax calculated as:

* + ( **Income** – deduction ) ∙ 20%, when **Income** is smaller than 35 000;
  + 6 000 + ( **Income** – deduction – 30 000 ) ∙ 40%, when Income is larger or equal to 35 000;

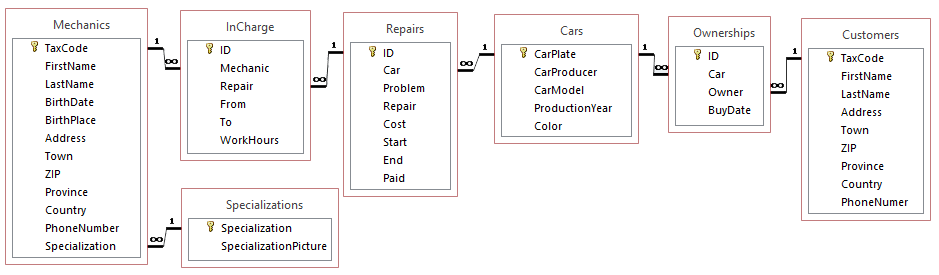
deduction is 6 000 when **WorkType** is “dependent” and 3 000 when **WorkType** is “self”. When **WorkType** is something else, deduction is 0 and a message box must appear to warn the user.

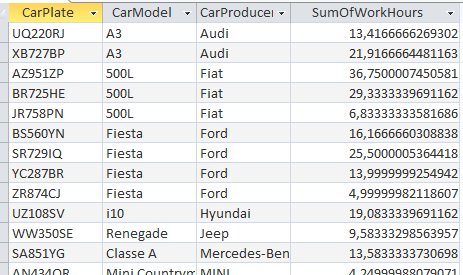
Save the file as Macro-enabled Workbook **banks.xlsm** or as **banks.xlsx** if you have skipped VBA exercise.

**TURN PAGE FOR ACCESS 🡪**

## Exercise Access

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



* create query **query1** that lists all the customers with phone number starting with 0. Fields: FirstName, LastName, PhoneNumber;
* create query **query2** that lists for each car all the repairs and for each one the total amount of workhours, sorted first by production’s year, then by car producer and then by car model. Fields exactly in this order and only these ones: CarPlate, CarModel, CarProducer, sum of WorkHours.

## Save and return:

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