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| unibz__FacEconomics_black | Name  ID Nr.  Exam  Exam Code  Exam Date  Signature | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Information Systems and Data Management  27006  29/01/2016  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

You have only one paper. No questions are allowed, if you have doubts on the theoretical questions fell free to write them on this paper. You have 45 minutes starting from now.

Exercise Relational databases

Draw the schema of this database, using at least (more if necessary): 3 tables, a junction table, 15 fields in the entire database. Try to make the database as complete as possible, keeping it simple and not contorted. You must indicate very clearly field names, Access field types, primary keys, relations with their “1” and “many” sides and the fields involved in the relations, required fields, indexed fields, at least two validation rules. For all the fields whose name is not obvious, you must also include a small comment that lets everybody understand what the field should contain. You must also justify non-standard choices.  
Moreover, suggest two new queries (in English, not in Access nor in SQL): one that involves at least two tables and is not a summary and another one that needs a summary query to be implemented.

**Car workshop (officina, Autowerkstatt)**: this temporal database handles data of a workshop’s repairing activity, in particular data on cars, customers and repairs. Each customer has one or several cars which could be repaired several times. The database must be able to answer to the question “How many reparations over 500 euro to cars produced after 2010 were made in July 2015?”

Exercise Theoretical questions

For each sentence, check either the TRUE or the FALSE box.

**TRUE  FALSE  You have written your name above on this paper**

**1000 Gigabytes are approximately:**

TRUE  FALSE  1000 MB   
TRUE  FALSE  1 million MB   
TRUE  FALSE  10 KB   
TRUE  FALSE  1000 KB   
TRUE  FALSE  1 GB   
TRUE  FALSE  1000 GB

**This is hardware:**

TRUE  FALSE  hard disk  
TRUE  FALSE  operative system

**To compress the file C:\Windows\Myfiles\document.doc on a unibz computer:**

TRUE  FALSE  it is necessary to copy or move the file to your Desktop first

TRUE  FALSE  it is necessary to compress the whole directory C:\Windows\Myfiles

TRUE  FALSE  right click the mouse on the file, choose IzArc and you find “Add to document.zip”

TRUE  FALSE  right click the mouse on the file, choose IzArc and you find “Add to Archive…”

TRUE  FALSE  it is not possible to compress a single file

**TURN PAGE 🡪**

**With only “Read” and “Read & Execute” permissions on a file, you may:**

TRUE  FALSE  delete it

TRUE  FALSE  open it

TRUE  FALSE  copy it

TRUE  FALSE  execute it (if it is a program)

TRUE  FALSE  rename it

**This university building in Piazza Sernesi and the Athesia bookshop website are:**

TRUE  FALSE  on the same LAN   
TRUE  FALSE  on the same WAN   
TRUE  FALSE  connected via the Internet

**This program is a web browser:**TRUE  FALSE  Outlook  
TRUE  FALSE  Windows 7  
TRUE  FALSE  Eudora  
TRUE  FALSE  Mozilla Firefox  
TRUE  FALSE  IzArc  
TRUE  FALSE  Adobe Acrobat Reader  
TRUE  FALSE  Mozilla Thunderbird

**Under perfect conditions ADSL connection is faster than**TRUE  FALSE  LTE   
~~TRUE  FALSE  UMTS~~TRUE  FALSE  Wi-Fi

**An antivirus:**

TRUE  FALSE  is always proprietary software

TRUE  FALSE  is dangerous for the computer

TRUE  FALSE  may slow down an old computer if kept continuously running

**If your email account continuously receives spam:**TRUE  FALSE  you reply to some emails asking to be deleted from the customers’ database

TRUE  FALSE  your email address probably appears on some public websites

TRUE  FALSE  it is a good idea to set up an antispam on your mailbox

**To close a locked application in a fast way you may try to:**TRUE  FALSE  press CTRL+ALT+DEL and kill the application

TRUE  FALSE  open the Task Manager and kill the application

TRUE  FALSE  press CTRL+ALT+ESC and kill the application

TRUE  FALSE  press the \_ symbol on the upper right corner of the application’s window

**You want to transmit a file such that only the receiver can read it and**TRUE  FALSE  you encrypt it with your public key

TRUE  FALSE  you encrypt it with your private key

TRUE  FALSE  you encrypt it with the receiver’s private key