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| unibz__FacEconomics_black | Name  ID Nr.  Exam  Exam Code  Exam Date  Signature | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Information Systems and Data Management  27006  06/09/2017  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Exercise Theoretical questions

No questions are allowed, if you have doubts on the theoretical questions fell free to write them on this paper. You have 15 minutes starting from now.

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

**TRUE  FALSE  You have written your name above on this paper IN A READABLE WAY**

**This is an operating system for desktop computers**

TRUE  FALSE  Microsoft Windows 10  
TRUE  FALSE  iOS  
TRUE  FALSE  Microsoft Access 2013

TRUE  FALSE  Android 4.1.2

**This is a typical extension for pure text files**

TRUE  FALSE  .com

TRUE  FALSE  .zip

TRUE  FALSE  .txt

TRUE  FALSE  .docx

**When you double-click on a program**

TRUE  FALSE  you may not double-click on programs  
TRUE  FALSE  the program runs  
TRUE  FALSE  the program is opened by another file

TRUE  FALSE  the program opens up and you see the files that are inside

**LAN means**

TRUE  FALSE  Local Area Network

TRUE  FALSE  Limited Account Network

TRUE  FALSE  Link ADSL Network

TRUE  FALSE  Limited Access Network

**The crawler technique used by Google**

TRUE  FALSE  is used to find webpages   
TRUE  FALSE  finds all the pages on the WWW  
TRUE  FALSE  assigns a higher score to webpages which receive many links from other pages  
TRUE  FALSE  assigns a higher score to webpages which contain many links towards other pages

**You are digitally divided if**

TRUE  FALSE  you have only an ADSL connection   
TRUE  FALSE  you have only a 3G connection  
TRUE  FALSE  you have only a connection slower than 1 Mbps  
TRUE  FALSE  you have no Internet connection

**TURN PAGE 🡪**

**This is an aspect for which digital signature with temporal mark is better than handwritten signature**

TRUE  FALSE  verifying authenticity of the signature

TRUE  FALSE  signing immediately without any special device

TRUE  FALSE  deducing the exact sign date

TRUE  FALSE  signing thousands of similar documents

**Cryptolocker**

TRUE  FALSE  is a virus  
TRUE  FALSE  encrypts your documents  
TRUE  FALSE  is ransomware  
TRUE  FALSE  is a keylogger

**RAID0**

TRUE  FALSE  makes your computer faster  
TRUE  FALSE  protects your computer from a hard disk crash  
TRUE  FALSE  needs two disks  
TRUE  FALSE  when you erroneously delete a file, it lets you recover it

|  |
| --- |
| **Windows users (Mac users please do NOT answer these 2 questions)**  **To move a file to another directory**  TRUE  FALSE  press CTRL+C, right-click on the other directory’s icon and choose Paste  TRUE  FALSE  press CTRL+X, right-click on the other directory’s icon and choose Paste  TRUE  FALSE  press CTRL+C, open the other directory and press CTRL+V inside it TRUE  FALSE  press CTRL+X, open the other directory and press CTRL+V inside it  **To delete program file called abc.exe**  TRUE  FALSE  you may not delete file abc.exe, since it is a program TRUE  FALSE  select file abc.exe and press DEL/ENTF/CANC TRUE  FALSE  select file abc.exe, right-click and choose Delete TRUE  FALSE  drag file abc.exe to the Recycle Bin |
| **Mac users (Windows users please do NOT answer these 2 questions)**  **To move a file to another directory**  TRUE  FALSE  press Image result for apple command+C, right-click on the other directory’s icon and choose Paste Item  TRUE  FALSE  press Image result for apple command+X, right-click on the other directory’s icon and choose Paste Item  TRUE  FALSE  press Image result for apple command+C, open the other directory and press Image result for apple command+V inside it TRUE  FALSE  press Image result for apple command+X, open the other directory and press Image result for apple command+V inside it  **To delete program file called abc.exe**  TRUE  FALSE  you may not delete file abc.exe, since it is a program TRUE  FALSE  select file abc.exe and press DEL/ENTF/CANC TRUE  FALSE  select file abc.exe, right-click and choose Move To Trash TRUE  FALSE  drag file abc.exe to the Trash |

Exercise Relational databases

You have only 3 sheets of blank paper, do not ask for extra ones. You have 35 minutes starting from now.

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 query and another one that needs a summary query to be implemented.

**Vehicles’ fleet**: this temporal database handles the vehicles owned by one company. The fleet includes vehicles of different types and must track which employee uses which vehicle and when. The database must be able to answer the question “Who was using car EB743VZ on 7th March 2017?”.