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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**

**1 KB**

TRUE  FALSE  can store some pictures in good quality  
TRUE  FALSE  can store a movie in low quality  
TRUE  FALSE  is approximately 1000 TB

TRUE  FALSE  is approximately 1000 MB

**According to Moore’s law**

TRUE  FALSE  the speed of processors doubles every eighteen months  
TRUE  FALSE  the speed of processors doubles every six months  
TRUE  FALSE  the speed of programs doubles every eighteen months

TRUE  FALSE  the speed of programs doubles every six months

**Freeware software**

TRUE  FALSE  is automatically open source  
TRUE  FALSE  can be freely modified

TRUE  FALSE  is costless  
TRUE  FALSE  is tailored to the customer’s needs

**Key DEL / ENTF / CANC**

TRUE  FALSE  is used to delete the previous character in a text  
TRUE  FALSE  is used to delete the next character in a text  
TRUE  FALSE  while selecting a file, if pressed alone it sends the file to the recycle bin  
TRUE  FALSE  while selecting a file, if pressed alone it deletes the file forever

**To move a file to another directory**

TRUE  FALSE  select, press CTRL+**X** and then CTRL+V in the new location

TRUE  FALSE  select, press CTRL+**C** and then CTRL+V in the new location

TRUE  FALSE  drag it while a symbol + appears

TRUE  FALSE  drag it while a symbol + does not appear

**This is a mailreader program**

TRUE  FALSE  Microsoft Outlook

TRUE  FALSE  Mozilla Thunderbird

TRUE  FALSE  Mozilla Firefox

TRUE  FALSE  Google Chrome

**TURN PAGE 🡪**

**When sending an email from a PEC account to another PEC account**

TRUE  FALSE  you have a legal sent proof  
TRUE  FALSE  you have a legal received proof  
TRUE  FALSE  you have a legal read proof  
TRUE  FALSE  it is like sending a “Raccomandata con ricevuta di ritorno”

**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

**Google**

TRUE  FALSE  is able to search images

TRUE  FALSE  is able to search for webpages which consist in Excel sheets

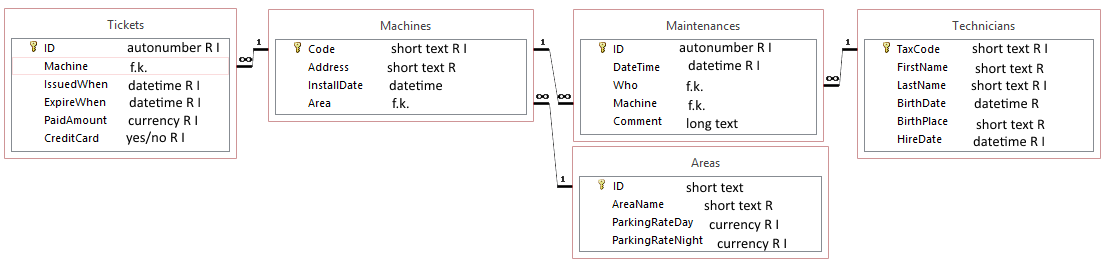
TRUE  FALSE  is able to search for webpages containing an exact sequence of words

TRUE  FALSE  is able to search for webpages containing some words but excluding others

**Spammers get your email address**

TRUE  FALSE  generating it automatically, attaching common names, surnames and domains  
TRUE  FALSE  from the emails you write  
TRUE  FALSE  whenever you type it on a forum  
TRUE  FALSE  whenever you type it publicly on Facebook

Exercise Relational databases



Note that if the parking rates were more than exactly 2, we would need an appropriate table with rates linked to Areas. As an exercise, you can build it.

A lot of fields are R (for example all tickets’ fields) since they are automatically filled in by the machine.

Field PaidAmount would not be necessary as it can be calculated from IssudedWhen, ExpireWhen and the rates in Areas. However, as sometimes this calculation is complicated by a parking time which overlaps from day to night or from a working day to a day when the machine is off, it is better to store the paid amount directly.

We assume that payment is possible only by cash or credit card.

Validation rules:

ExpireWhen > IssuedWhen

PaidAmount > 0

ParkingRateDay > 0

ParkingRateNight >= 0 (it might be zero for some areas)

HireDate > BirthDate

Query which uses 2 tables and is not a summary: which technicians worked yesterday?

Summary query: how many interventions did Mr. Smith make in 2016? or how much did we gain from area “historical centre” in 2016?