

Database Systems

Homework 8

Jonathan Henrique Maia de Moraes (ID: 1620855)

11/30/2015

Chapter 11

1 Exercise 01 - Page 312

Starting with *physical* terms:

- The computer which the database are in would be neither in the basement, ground floor, top floor, and in a floor above the eight floor;
- The database's room would be distant from the windows of the building;
- The access to the database would be controlled by biometric systems;
- A mirrored database would be created in other region of the country, for disaster recovery (or emergencial backup);
- Others backup rooms would be created in at least 3 different cities with regular updates and synchronism.

About Data Security:

- A high-security controlled access to the computer system and the database;
- All the data would be highly encrypted;
- Trustful anti-virus softwares would be installed and constantly updated in the database's computer;
- A Firewall (or Proxy Computer) would extract the data's from a client or outside computer message, avoiding that malicious code reaches the company's main computer;

- A concurrency control layer would be created to avoid deadlocks.
- Forward and backward recovery programs would be created and maintained, to be used in emergencial cases.

All the employees would be regularly trained in terms of data security practices.