CS Case Study Anticipated Designed Paper

by Dennis & Marshall

1.

(a) Define an *Application programming interface (API)*. [2]

(b) Outline the contribution that Load balancing algorithm makes as one of the main technique to manage the multiple requests emerging in the same time. [2]

2.

(a) Suggest the difference between HTTP and HTTPS, explain the mechanics of HTTPS and state why the use of HTTPS can better protect the privacy of the citizens during the transfer of user data. [4]

(b) One of the ethical issue involved in the EDS system is that the user might report false information or make up accident. Please suggest a practical solution to avoid this issue. [4]

3.

During an incident, there are often many people reporting over the same accident. Given the condition that a place called Constanti in Bangui is experiencing traffic jam and Monga is experiencing Blaze, explain how the EDS system will utilize stateful connection, and suggest a way for the EDS system to sort the information to avoid flooding notifications to the staff. [6]

4.

The accessibility of Internet and the popularization of mobile phones impetus wide range of emergence of mobile applications. The changes both in technologies and demographics makes the city manager rethink of the system used for emergency management.

Discuss the potential effects that a *Multitier architecture* makes on the scalability of the EMIS. You should make reference to the computer science identified in this case study.
[12]