LESSON 5: DATABASES

PART 1: VOCABULARY

Extra Exercises

Exercise 1: Look at the meaning and write the words

1. Tính không nhất quán	
2. Chỉ số	
3. Truy vấn	
4. Dữ liệu sơ cấp	
5. Bản ghi dữ liệu	
6. Hệ quản trị CSDL có cấu trúc	
7. Cơ sở dữ liệu tạm thời	
8. Nhà cung cấp cơ sở dữ liệu	

Exercise 2: Match the words and phrases in column A to their definitions in column B

A	B
1. index 2. query 3. raw data 4. record 5. temporal database	A. information that has been collected but not formatted or analyzed. B. a database that has certain features that support time-sensitive status for entries. C. a group of related data held within the same structure. D. used to quickly locate data without having to search every row in a database table every time a database table is accessed. E. a request for data or information from a database table or combination of tables.

Exercise 3: Complete the sentences with a suitable word beginning with a given letter

1. A DBMS generally manipulates the data, the data format, **f**_ _ _ _ names, record structure and file structure.

2. **D**_ _ _ **c** _ _ _ _ _ _ _ _ _ is the process of gathering and measuring information on targeted variables in an established system.

3. Within **w**_ _ _ _ _ _ _ _ _, data is organized into columns and rows of cells.

4. **V**_ _ _ _ _ _ _ _ _ can only check if the data is sensible and within reasonable limits, it cannot check whether the data is accurate.

5. Simply having to enter one letter instead of a possible six will speed up **d**_ _ _ **e**_ _ _ _**.**

6. A list of customer names could be **s**_ _ _ _ _ into alphabetical order by surname, or a list of people could be put into numerical order by age.

7. The telephone directory stores the telephone numbers of people sorted by their names, so that the names can be **s**_ _ _ _ _ _ _ easily.

8. By creating an **i**_ _ _ _ on an employee's name, you can retrieve data more quickly for that employee than by scanning the entire table.

9. This kind of a relational structure makes it possible to run **q**_ _ _ _ _ _ that need to retrieve data from multiple tables simultaneously.

10. The data are stored as **r**_ _ _ _ _ _, each of which is a collection of fields containing only one value.

PART 2: GRAMMAR

Extra exercises

Exercise 1: Write the correct form of the words in the bracket

1. Formally, a "database" _____ (refer) to a set of related data and the way it is organized.

2. The DBMS provides various _____ (function) that allow entry, storage and retrieval of large quantities of information and _____ (provide) ways to manage how that information is organized.

3. A common use of a database system _____ (be) to track information about users, their name, login information, various addresses and phone numbers.

4. Consistency is a state where every relation in a database _____ (remain) consistent.

5. DBMS is equipped with query language, which _____ (make) it more efficient to retrieve and manipulate data.

6. DBMS offers many different levels of security features, which _____ (enable) multiple users to have different views with different features.

7. A typical DBMS has users with different rights and permissions who use it for different _____ (purpose).

8. Administrators _____ (maintain) the DBMS and are responsible for administrating the database.

9. Once the database is operational, it is very difficult to make any _____ (change) to it.

10. A database system normally contains a lot of _____ (data) in addition to users' data.

Exercise 2: Write full sentences basing on given words

1. Could / help / code / data?

……

2. Can / help / choose / suitable / backup / solution.

……

3. Would / help / sort / data / by / name?

……

4. First step / be / call / data collection / which / gather / raw data /

……

5. Could / tell / what / data entry / mean?

……

6. Finally / you / arrange / data / tables format / so that / it / can / be /analysed.

……

7. After / data coding / you / must / enter / data / a system.

……

8. Next / you / clean / data / double-check / faults / inconsistencies ……

Exercise 3: Find the mistake in each sentence and correct it

Example: *He do not (A) go (B) to school by (C) bus every day (D).*

Answer: A=> does not

1. An (A) user can apply as many (B) and as different filtering options (C) as required (D) to retrieve a set of data.

2. How many (A) Gigabyte (B) can the hard drive of your computer hold (C)? – It can hold 6 GB of (D) data.

3. The main aim of a (A) DBMS are (B) to supply a way (C) to store up and retrieve database information that is (D) both convenient and efficient.

4. The database system must ensure (A) the safety of the information stored (B), despite system crashs (C) or attempts (D) at unauthorized access.

5. Large companies needed to build (A) many independent data file (B) containing related data, often in quite different formats (C) to fulfill different purposes (D).

6. It is (A) important for (B) data processing to be done (C) correctly as not to negatively affects (D) the end product, or data output.

7. It is important that the data source (A) available are trustworthy and well-built (B) so the data collected (C) is of the highest possible quality (D).

8. Cloud technology build (A) on the convenience of current electronic (B) data processing methods and accelerates (C) its speed and effectiveness (D).

9. Big data cloud technology allows for (A) companies to combine (B) all of their platform (C) into one easily-adaptable (D) system.

10. When data is (A) to be entered into (B) a computer program for statistical analysis, usually this take (C) the form (D) of a matrix.

PART 3: LISTENING

Exercise 1: Listen to the talk and fill in the blanks with NO MORE THAN TWO WORDS and/or A NUMBER to complete the sentences

1. Everyday, we upload 55 million pictures, 340 million tweets and _____.
2. Totally, we produce 2.5 quintillion bytes a day so we call this _____.
3. By analyzing big data of their viewers, _____ could produce a sucessful series with perfect combination of actors, directors and storyline.
4. The big data of _____ is being analyzed to develop a car that can completely prevent accident.
5. In the future, by using big data of _____, the treatment for such diseases as cancer would become much easier.

Exercise 2: Listen to a short talk and answer the questions

1. According to the talk, what is the cloud?
2. How is the traditional on-premises computing?
3. What does cloud computing empower companies?
4. What is Azure?
5. How many countries does the Microsoft serve?

PART 4: SPEAKING

Activity 1: Interview

- Work individually
- Go around class and ask at least three friends
- Interview about their storage and backup solution they use
- Take notes to complete the table below

	Student 1	**Student 2**	**Student 3**
Name of storage and backup solutions			
Storage capacity			
Special features			

Sample

A: *Good morning, Tuan! May I ask you some questions, please?*

B: *Sure*

A: *Do you use any storage and backup solution?*

B: *Yes, I use a USB.*

……..

Activity 2: Making a conversation

- Work in pairs

- Ask and answer the information in the table

Storage and backup solution	Google Drive
Capacity	15 GB free
Backup data	Music, photos, studying documents.
Frequency	Once a month
Reason to use	Convenient, easy to use.

Activity 3: Free talk

- Work individually

- Prepare a short talk about the most popular data storage and backup solution based on the suggested questions

Suggested questions:

1. What are the current storage and backup solutions?
2. What storage and backup solution is the most popular?
3. What are its special features?
4. What are the advantages of this solution?
5. What are the disadvantages of this solution?

PART 5: WRITING

Task 1: Write full sentences basing on given words

1. There / six steps / the data processing.

…….

2. First step / be / call / data collection / which / help you / gather / raw data

…….

3. Secondly / you / create categories / organize / data / relevant groups.

…….

4. Then / you / have to / arrange / systemize / data

…….

5. After / data coding / you / must / enter / data / a system.

…….

6. Next / you / clean / data / double-check / faults / inconsistencies

…….

Task 2: **Write about the data processing steps basing on these following questions**

Suggested questions:

1. How many steps are there in data processing?
2. What is the name of each step?
3. What do you have to do in each step?
4. Which step is the most important?