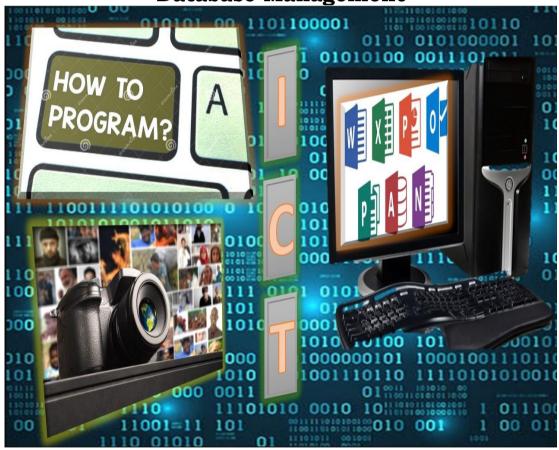




ICT 9 Activity Sheet Quarter 3 | Week 2

Database Management



MARICAR R. PORNEL, Oton NHS
ZALDY M. TONDO, Division Science Coordinator
WRITERS

STOTION OF SHIP

Introductory Message

Welcome to ICT 9!

The **Learning Activity Sheet** is self-directed instructional materials aimed to guide the learners in accomplishing activities at their own pace and time using the contextualized resources in the community. This will also assist the learners in acquiring the lifelong learning skills, knowledge and attitudes for productivity and employment.

For learning facilitator:

The **ICT 9 Activity Sheet** will help you facilitate the leaching-learning activities specified in each Most Essential Learning Competency (MELC) with minimal or no face-to-face encounter between you and learner. This will be made available to the learners with the references/links to ease the independent learning.

For the learner:

The **ICT 9 Activity Sheet** is developed to help you continue learning even if you are not in school. This learning material provides you with meaningful and engaging activities for independent learning. Being an active learner, carefully read and understand the instructions then perform the activities and answer the assessments. This will be returned to your facilitator on the agreed schedule.

Name of Learner:	Grade and Section:
School:	Date:

ICT-9 ACTIVITY SHEET Database Management

Learning Competency:

Discuss how different data are stored through a program.

Support Competencies:

- 1. Differentiate data and information.
- 2. Differentiate Manual Filing System, File-based System and Database System.
- 3. Explain what is a Database Management System.

Background information for the learners

The data that every organization creates is a very valuable resource, that is why data management is very important.

With proper data management, an organization will be more organized and productive. For example, it will be easier for employees to find and understand the information that they need to do their job. Information will be easily shared, stored and rerieved.

In this lesson, you will learn how data are kept or stored from a manual system, file-based system, and to a more reliable, efficient and secured way storing data in a program using a database management system.

Activity Proper Activity 1.

DATA VS. INFORMATION			
Examples of Data	Examples of information		
130/80 blood pressure reading	Maria Makiling's blood pressure		
	reading on 05/01/21		
Date on an employee application	Employee application record		
Number of heart surgery in June	Medical Hospital heart surgery for		
	June		
Vendor address	Vendor record		

Data. Is referred to as facts concerning objects and events that could be recorded and stored on computer media.

Information. Is referred to as data that has been processed in such a way as to increase knowledge of the person who uses the data. Information reveals meaning.

Good, timely, relevant information is a key to decision making.

Manual Filing System

- Involve storing of documents by hand in a filing cabinet. These files kept in cabinets are locked to ensure security.
- It works well when the data or number of items to be stored is small.
- Works well on a large number of items which only require storage and retrieval.
- Limited processing of data.

File-Base System

 The systems that are used to organize and maintain data files are known as file-based data systems. These file systems are used to handle a single or multiple files and are not very efficient.

Some limitations of File-Based system:

- limited to a smaller size and cannot store large amounts of data
- it cannot support complicated queries, data recovery etc.
- the data is difficult to share with multiple users
- redundancy of data

Database System

Databases were developed as a solution for the limitations of file-based systems for data storage and management.

The Essence of a Database:

- Organization of data
- Efficient retrieval of data
- Reliable storage of data
- Maintaining the consistency of the data
- Sharing and Structuring of data

Databases have become an integral part of the day-to-day life in the business world. Banks, airlines, hospitals, and other businesses and agencies are using this to maintain an efficient and secured flow of information in their daily transactions.

Database system is a combination of software, data and computer hardware that implements a collection of data models and applications. A database system uses a DBMS together with application programs to create an information system for a specific purpose.

Database Management System (DBMS)

- A Database Management Systems (DBMS) is software that facilitates the definition, creation, storing, maintenance or and access control to the database.
- It allows users to insert, update, and retrieve data from the database.
- It has features such as security (preventing unauthorized users from accessing the database), transaction management, backup, and recovery.

Components of DBMS Environment

- **Hardware**. Physical device on which the DBMS resides. The particular hardware depends of the organization's requirements and the DBMS used Example: disk drives, printers, cables, etc.
- **Software**. The software component comprises of the DBMS software itself and the application programs together with the operating system.
- **Data**. It contains both the operational data and meta data. (a data that describes or gives information on another data.) It acts as a bridge between the machine components and human components.
- **Procedures**. Refers to the instructions and rules that govern the design and use of the database. The user of the system and the staff that manage the database requires require documented procedure on how to use or run the system.
- **Users**. People who interact with the database. Example: application programmers, end-users, data administrators

Answer the following questions

1.	Data:	lata and information in a Banking industry. Information :		

Activity 2.

Study the figures below and answer the following questions.

The figures below are examples of DMBS.

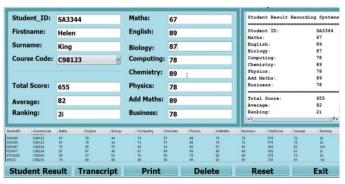


Figure 1



Figure 2

- 1. What do you think the application of each DBMS was designed for?
- 2. If you are a user of the DBMS, what information can you derive from it?

Activity 3.

Multiple choice. Select the letter of your choice.

- 1. Which one of the following is an example of data?
 - a. name b. number of days late c. grade level d. all of the above
- 2. Where are the files kept in a manual filing system?
 - a. computer b. database c. filing cabinet d. none of the above
- 3. What component of DBMS environment that refers to the instructions and rules that govern the design and use of the database?
 - a. user b. procedure c. data d. software
- 4. The following are the functions of DBMS, except
 - a. creating c. updating
 - b. back-up and recovery d. data isolation
- 5. Which one of the following is an example of information?
 - a. patient's name c. date of admission
- b. Medical Hospital total cases of Covid-19
 d. diagnosis result
 6. The following are the limitations of file-based system, except
 - a. time consuming c. acu
 - c. acurate result
 - b. data duplication
- d. large data cannot be shared easily

True or false. Write **T** if the statement is true and **F** if the statement false.

- 1. One of the important components in a DBMS are the users.
- 2. The software component act as a bridge between the machine components and human components.
- 3. One of the limitations of a database system is the efficiency of retrieving data.
- 4. Files that are kept in a filing cabinet are safe from theft or robbery.
- 5. Information helps human beings in their decision makings.
- 6. The DBMS itself is an example of a software.

Reflection.

Complete the statements below.

I understand		
I don't understand		
I need more information abou	 at	



Links and/or Other References

https:/	/www.s	slides	share.net,	/nishant_munj	al/database-mar	nagement-	system-71946828

https://www.slideshare.net/NILESHX/database-management-system-28774171

https://taxation88.blogspot.com/2019/11/difference-data-information.html

https://slideplayer.com/slide/6078784/

https://www.google.com/search?q=metadata+meaning

https://www.google.com/search?q=example+of+student

https://www.google.com/search?q=example+of+library

https://www.tutorialspoint.com/File-based-Data-Management-System