DBMS Study Notes in PDF for Bank Exams

May it be SSC CGL, Railways RRB or any banking exam, **computer awareness has become an inevitable part** of the syllabus. Therefore it becomes necessary for you to have knowledge about computer fundamentals in order to score well in these exams. To help you with the process of acquiring knowledge about computers we are providing you with some detailed information on **Database Management Systems** in the form of **DBMS Study Notes**. Read the DBMS study notes properly as questions are frequently being asked from it. Let's start with some knowledge on what Database is all about!

Meaning of Database (DB) - DBMS Study Notes

Any piece of information can be referred to as a data and the place where this data is stored in a way that it is **easily accessible** and can also be **modified when ever required** is known as a Database.

What is Database Management System (DBMS)

DBMS is actually a **tool or collection of programs** that enables us to perform any kind of operation on a data stored in a database. Database Management System allows you to store, modify and extract information whenever required. It comprises of **4 essential components** namely -

1. _User_ - A user may be of any kind like a DB administrator, system developer and an end user.
2. **_Database Applications_** - It may be departmental, personal computer or an enterprise.
3. **_DBMS_** - software which allows us to manage the data stored in database
4. _Database_

DBMS Examples - DBMS Study Notes

There are many examples of DBMS ranging from small systems that runs on your computer to huge ones used in a Mainframe computer. Let's look at some examples of DBMS listed below!

- MySQL
- PostgreSQL
- Microsoft Access
- SQL Server
- Oracle
- RDBMS (Relational Database Management System)
- dBase
- Clipper
- FoxPro
- FileMaker

Now that you have knowledge about Database and Database Management System, let's now learn what are the different types of Database Management System.

Types of DBMS - DBMS Study Notes

There are **4 major types** of Database Management Systems.

- **Hierarchical Database** - **rarely used** nowadays, uses **one to many relations** for data elements.
- **Network Database** - results in complex database structures as it uses **many to many relations**.
- **Relational Database Management System (RDBMS)** - **most popular** in the DBMS market, does not support many to many relations. eg -*MySQL, Oracle*

- **Object Oriented Database Management System (OODBMS)** - products based on this type of DBMS is still in their infancy, it supports conversion of data in the form of attributes. eg- *PostgreSQL*

History of Database Management System - DBMS Study Notes

- DBMS has evolved a lot since its birth in _**1960s**_
- Beginning with **Networking & Hierarchical databases** developed by **Charles W.Bachman**.
- Relational Model was proposed by **Ted Codd** in _**1970**_.
- Entity - Relational Model defined by **Peter Chen** in _**1976**_.
- Maturation of Relational Database and SQL took place in _**1970**_.
- Object Oriented Database developed in _**1985**_.
- Finally first Internet database applications were created in _**1995**_.
- In today's time we use **Structured Query Language (SQL)**, **Not only SQL (NoSQL)** and **Cloud database**

Functions of DBMS – DBMS Study Notes

Let's look into the details of the functions performed by a Database Management System in a computer.

- **Manages data dictionaries** that stores definition of various data elements and their relationships.
- **Provides storage** for not only a data but also all related data like procedural codes, data validation and entry forms.
- **Transforms and presents data** according to the user's expectations.
- DBMS **provides data privacy** by using security systems in a multi user database interface.

- **Allows multiple users to access any data** at the same point of time without any discrepancies.
- Ensures easy **data recovery and back up** in order to protect its integrity.
- It **allows users to communicate** and transact via emails and many other communication modes.

Purpose of Database Management Systems – DBMS Study Notes

Once you have read all about DBMS, its types and how it evolved over the years, now also understand the purpose of Database Management Systems.

- Database Management System is built to overcome the drawbacks of typical file processing systems.
- DBMS has reduced the data inconsistencies and difficulty in accessing data.
- It supports concurrent multiple users and ensures security of data.
- It also solves the integrity problem.

Now that you have read about Database Management System, its types, examples, facts related to DBMS evolution and its founders in DBMS Study notes, you can also read other articles related to **Computer Awareness for Banking and SSC exams** here!

Computer Notes for Bank & SSC Exams

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