



# **SNS COLLEGE OF TECHNOLOGY COIMBATORE**



**AN AUTONOMOUS INSTITUTION**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A’ Grade

Approved by AICTE New Delhi & affiliated to the Anna University, Chennai

## **DEPARTMENT OF MCA**

**Course Name : 19CAT609 - DATA BASE MANAGEMENT SYSTEM**

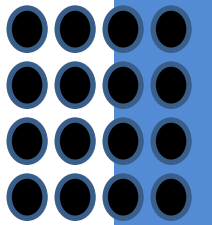
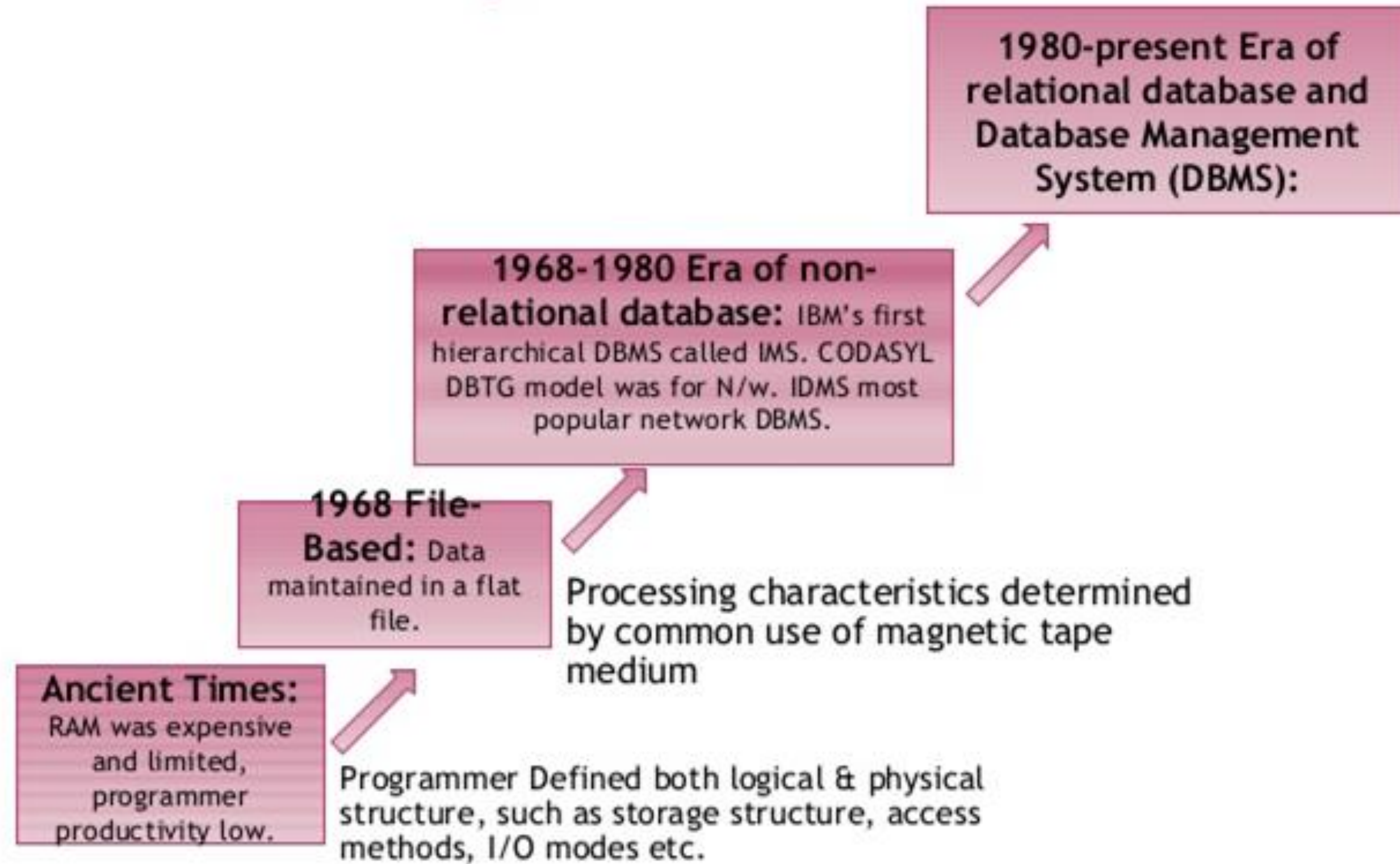
**Class : I Year / I Semester**

**Unit I - Introduction**

**Topic I – Historical Perspective**



# Database System - Brief Timeline

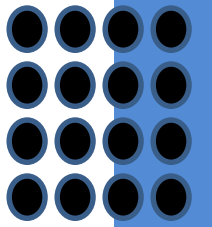




# Database Systems



- ❖ **1970: Ted Codd** at IBM's San Jose Lab **proposed relational models.**
- ❖ Two major projects start and both were operational in late 1970s
  - INGRES at University of California, Berkeley became commercial and followed up POSTGRES which was incorporated into Informix.
  - System R at IBM san Jose Lab, later evolved into DB2, which became one of the first DBMS product based on the relational model. (Oracle produced a similar product just prior to DB2.)
- ❖ **1976: Peter Chen** defined the **Entity-relationship(ER)** model
- ❖ **1980s:** Maturation of the relational database technology, more **relational based DBMS** were **developed** and **SQL standard** adopted by **ISO and ANSI.**

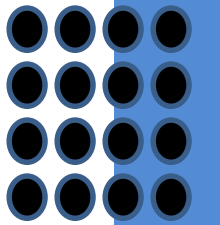




# Database Systems

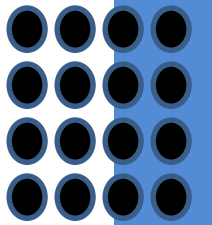


- ❖ **1985: Object-oriented DBMS (OODBMS)** develops. Little success commercially because advantages did not justify the cost of converting billions of bytes of data to new format
- ❖ **1990s: Incorporation** of object-orientation in **relational DBMSs**, new application areas, such as data warehousing and OLAP, web and Internet, Interest in text and multimedia, enterprise resource planning (ERP) and management resource planning (MRP)
- ❖ **1991: Microsoft** ships **access**, a **personal DBMS** created as element of Windows gradually supplanted all other personal DBMS products.
- ❖ **1995: First Internet database applications**
- ❖ **1997: XML** applied to database processing, which **solves** long-standing **database problems**. Major vendors begin to integrate XML into DBMS products.





# Components of a Database System



Four components: People, H/W, S/W, Data

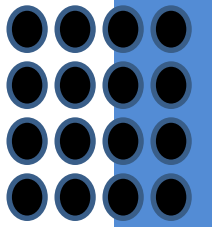
- **Data:** Data stored in a database include numerical data including whole numbers and floating- point numbers, and non numerical data such as characters , date, logical values.
- **Hardware:** hardware of the system can range from to a network of computers .It also includes various storage devices and input and output devices.



# Components of a Database System



- ◆ **Software** : Software of a DBMS includes the DBMS, operating system , network software and the application programs.
- ◆ **Users** : Three broad classes of users are considered.
  1. Application programmer: Develop application programs.
  2. End-Users : Access the database from a terminal using a query language.
  3. Data Base Administrator (DBA): The design, construction and maintenance of a database.





# History of Database Systems



1950s and early 1960s:

- Data processing using magnetic tapes for storage

  - Tapes provided only sequential access

- Punched cards for input

Late 1960s and 1970s:

- Hard disks allowed direct access to data

- Network and hierarchical data models in widespread use

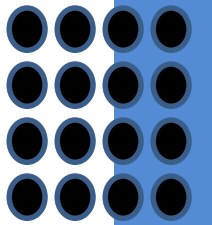
- Ted Codd defines the relational data model

  - Would win the ACM Turing Award for this work

  - IBM Research begins System R prototype

  - UC Berkeley begins Ingres prototype

- High-performance (for the era) transaction processing





# History of Database Systems



1980s:

Research relational prototypes evolve into commercial systems

SQL becomes industrial standard

Parallel and distributed database systems

Object-oriented database systems

1990s:

Large decision support and data-mining applications

Large multi-terabyte data warehouses

Emergence of Web commerce

Early 2000s:

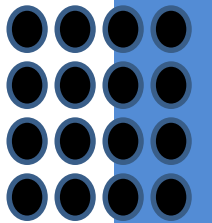
XML and XQuery standards

Automated database administration

Later 2000s:

Giant data storage systems

Google BigTable, Yahoo PNuts, Amazon, ..



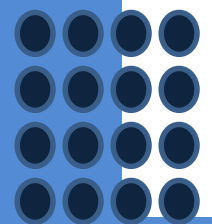




# Reference



1. <https://www.guru99.com/difference-between-file-system-and-dbms.html>
2. <https://www.javatpoint.com/dbms-vs-files-system>





# THANK YOU

