



WELCOME



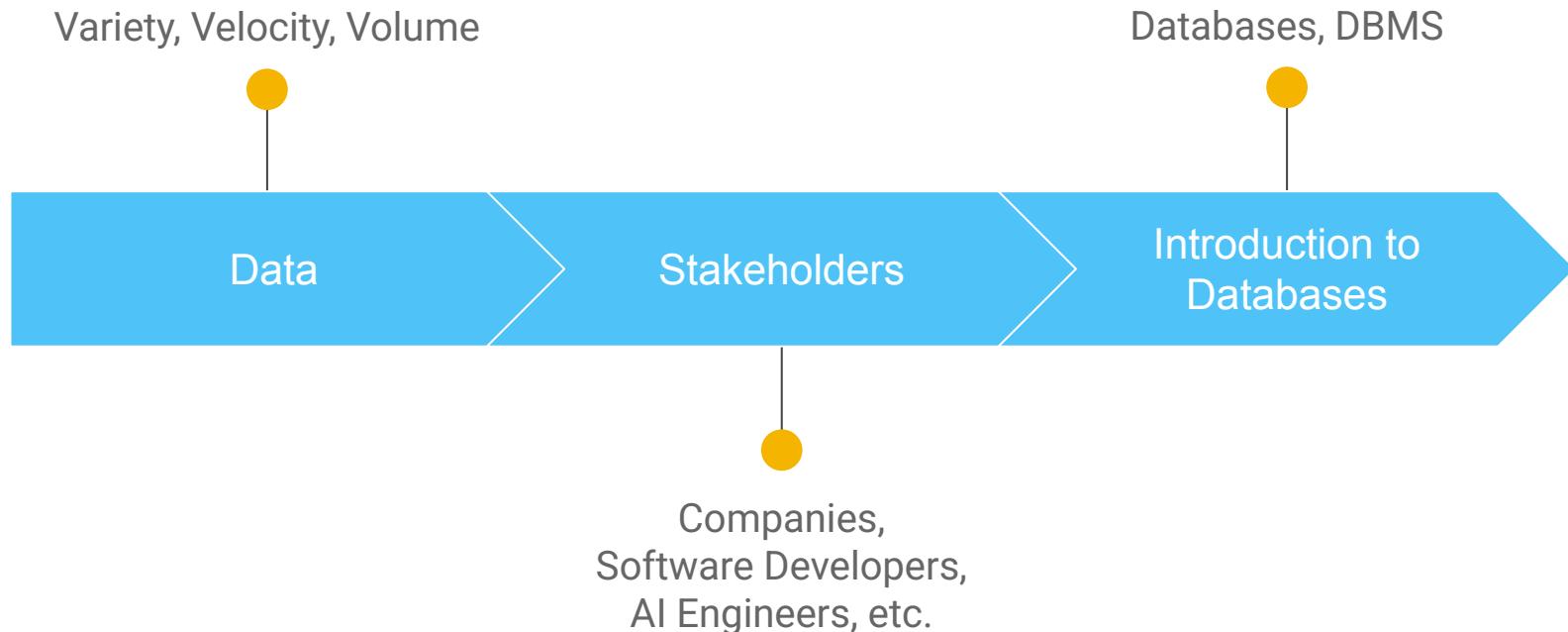


# Introduction to Databases

## | Part 1

Agenda for Today's Session

# Introduction to Databases



# Introduction to Databases

In this course, we will learn about

**Database & its usage**

from **designer, user** and  
**developer perspectives**



# Data



Meaning

# What is Data?

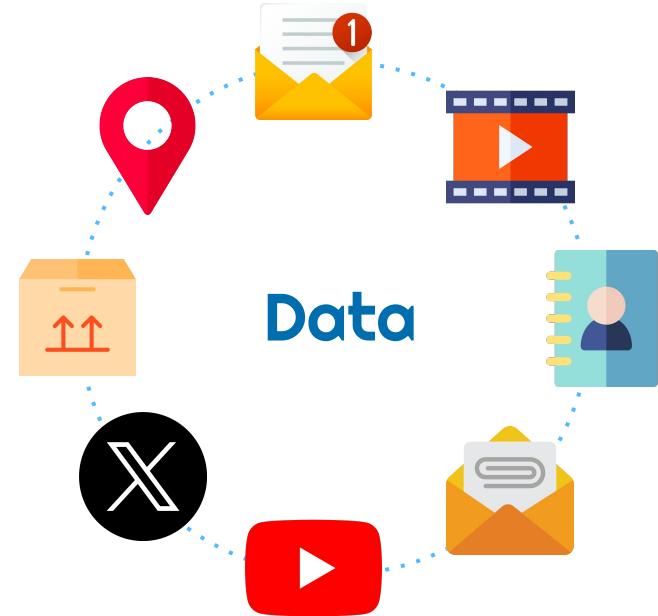
Any sort of information  
that is stored



# Variety

- **Contact details** in telephone directory
- **Messages & multimedia** on WhatsApp
- **Emails & attachments** on Gmail
- **Products & Orders** on Amazon
- **Location data** on Google Maps
- **Tweets/Posts** on social media

... and many more

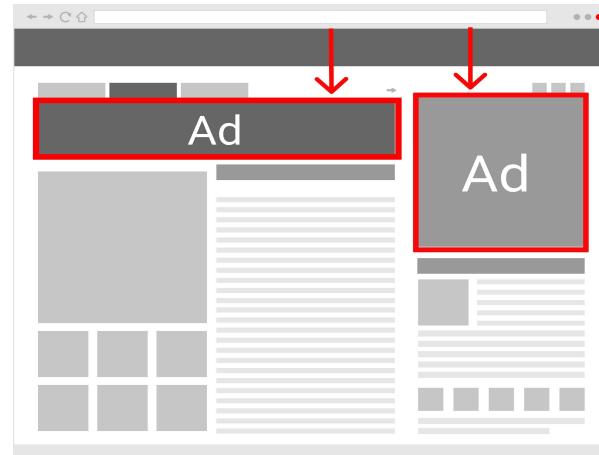


# Variety

Not only this, web applications store **activity** of its users in the application.

For example

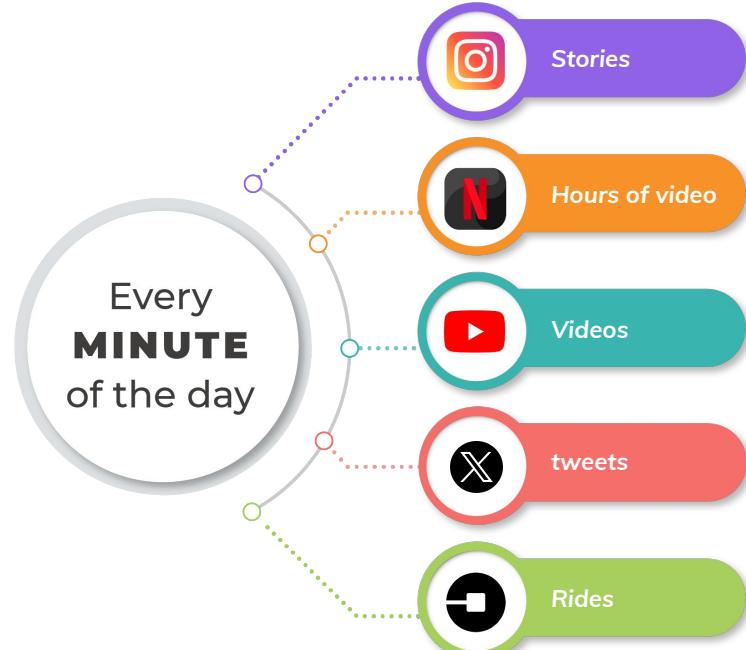
- ✓ Clicks on videos, ads, link, buttons
- ✓ IP Addresses



# Velocity

Huge amount of data is being created each day and for every minute of the Day!

- ✓ Millions of **message** on Whatsapp
  - ✓ Millions of **voice/video** calls
- and more...

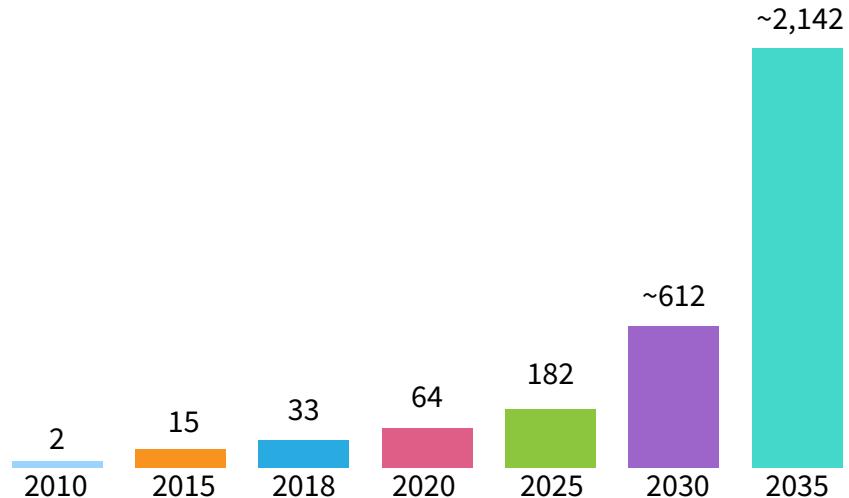


Data

# Volume

Global Data Creation is about to explode

It is estimated **182 zettabytes** of  
data will be created by **2025**



\*Note: 1 zettabyte = 1 billion terabytes

# Stakeholders

# Stakeholders

Data is used by almost everyone

- ✓ Companies
- ✓ Application Developers
- ✓ AI/ML Engineers
- ✓ Data Scientists, etc.



Stakeholders

# Companies

Companies mine this data,  
i.e., turn this data into useful information



Stakeholders

# Companies

To build attractive **reward/coupon models**  
which drive the company economy



Stakeholders

# Companies

To build powerful **recommendation systems** to retain customers for a long-term



**Flipkart**



**amazon**

**YouTube**

Stakeholders

# Companies

For targeted **advertisements**



Google AdMob



Google Ads

# Application Developers

Data is at the **heart of the applications**

Example

Platforms like Facebook, Twitter, tiktok, instagram etc. are about the posts/content created by the users



Stakeholders

# Application Developers

To bring **vital healthcare** and  
**technological information**, and  
**entertainment**, etc. **to people**



**•practo•**



Stakeholders

# Application Developers

To bring **services** to the  
**fingertips** of people



**99acres**



Stakeholders

# Application Developers

To help digitize nations



Stakeholders

# AI/ML Engineers

AI/ML Engineers use data to  
build intelligent softwares



Stakeholders

# AI/ML Engineers

- ✓ Personal Assistants
- ✓ ChatBots
- ✓ Virtual Health Assistants, etc.



Stakeholders

# AI/ML Engineers

Autonomous vehicles are trained  
with existing images and traffic records



TESLA



WAYMO



Stakeholders

# Data Scientists

Data scientists **collect data** and generate  
**deeper insights**

helping organizations make  
**data-driven decisions**



Stakeholders

# Data Scientists

In enhancing customer experience  
and resource optimisation



# World Leaders & CXOs

-By Narendra Modi  
PM, India

”

Data is the new oil,  
new gold

”

Data really powers  
everything that we do

- By Jeff Weiner  
Ex CEO at LinkedIn

-By Clive Humby  
Ex Chief Data Analyst



Data

# Used by Everyone

From startups to tech giants



Data

# Using data

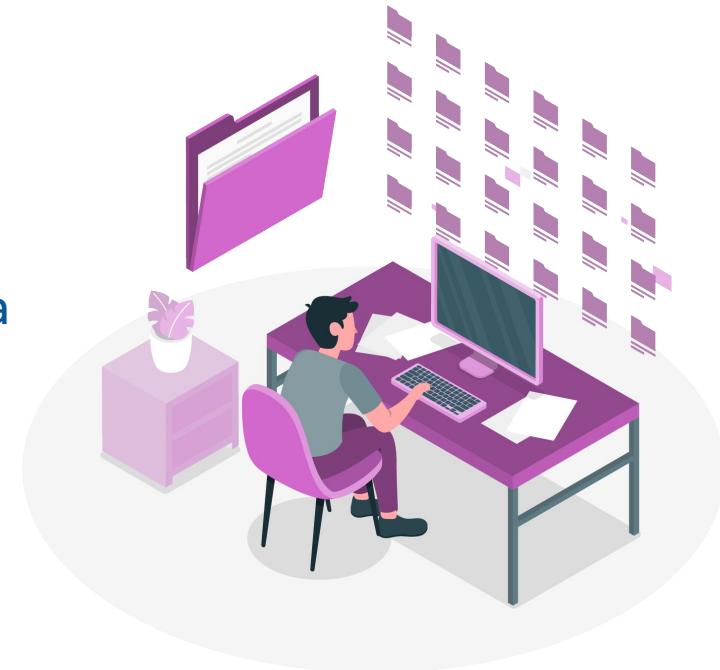
To perform **any operation**  
on the data,  
it should be stored in an  
**organized way**



Introduction

# Database

An Organised **Collection of Data**



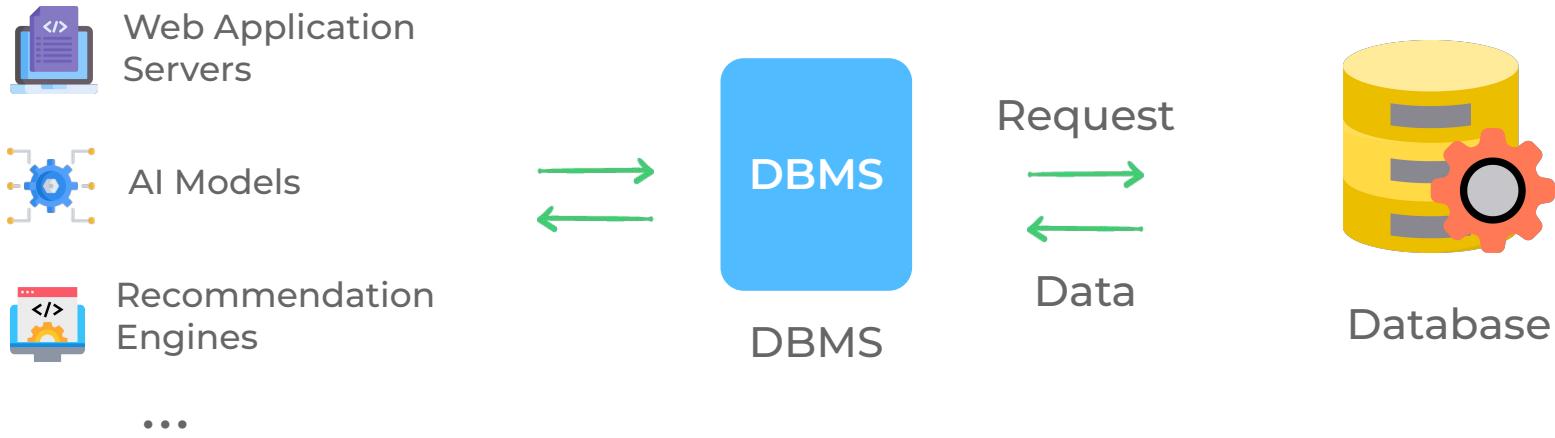
# Database Management System

A **software** that is used  
to easily **store** and **access**  
data from the **database** in a  
**secure** way



# Database Management System

So, every interaction with the database happens through the DBMS



# Usage

Every organisation  
currently uses **DBMS**  
to **store and maintain** their data

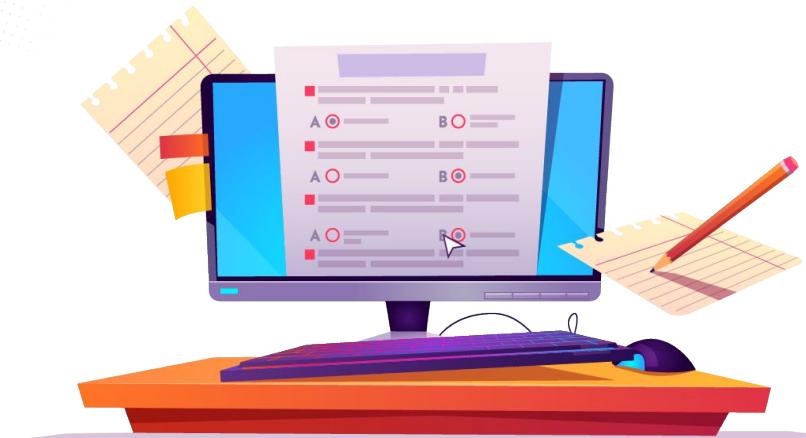


# Key Takeaways

- ✓ Data
  - Volume
  - Variety
  - Velocity
- ✓ Importance of data
- ✓ How various stakeholders use data
- ✓ Database
- ✓ DBMS



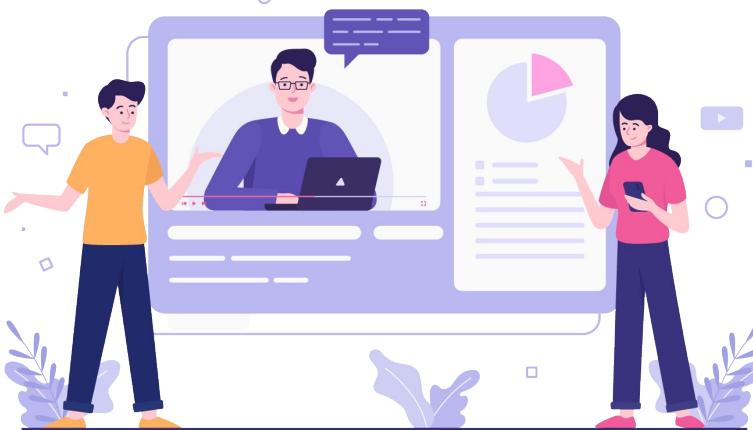
# Practice



Next Session

# Introduction To Database

## | Part 2





THANK YOU





ALL THE BEST



# World Leaders & CXO's

“

“Data is the new oil”

- Clive Humby

“

“Data is the new oil, new gold”

- Narendra Modi



# World Leaders & CXO's

**“Data really powers everything that we do”**

*- By Jeff Weiner, Ex CEO at LinkedIn*

**“Data are becoming the new raw material of business”**

*- By Craig Mundie, Senior Advisor to the CEO at Microsoft*

# World Leaders & CXO's



“  
Data really powers  
everything that we  
do

*Bill Gates,  
Chairman, Microsoft*

**Greg Papadopoulos**  
*Former CTO, Sun*

”

Data is the new  
oil, new gold



”  
Data is the new oil

*Dave Waters,  
Scientist, Oxford*



Introduction

# Databases

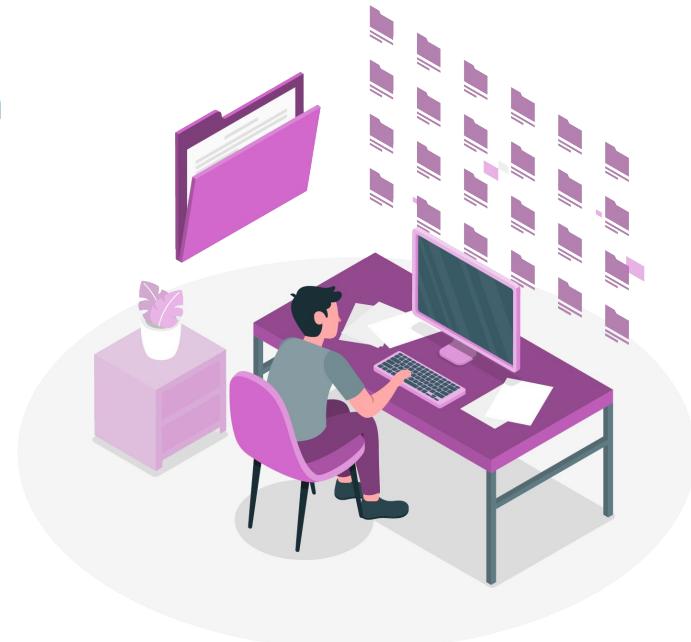
let's understand what exactly **data**  
is!



# Database

An Organised **Collection of Data**

- ✓ Telephone directory
- ✓ Dictionary
- ✓ Playlists
- ✓ Phone contacts
- ✓ Spreadsheets
- etc.



# End of Session 1



# Database Management System

Database Administrator	67k\$
Database Engineer	95k\$
Data Analyst	62k\$
Data and Analytics Manager	118k\$
Data Scientist	118k\$



DBMS

Introduction

# Databases

To start with, let's understand what exactly **data** is!



# Why all tech giants collect huge amounts of data every day?



# Databases



# Database Management System

DBMS provides **secure** & **easy** ways to  
**manage** data in the database.



DBMS

DBMS

Meaning

# What is Data?

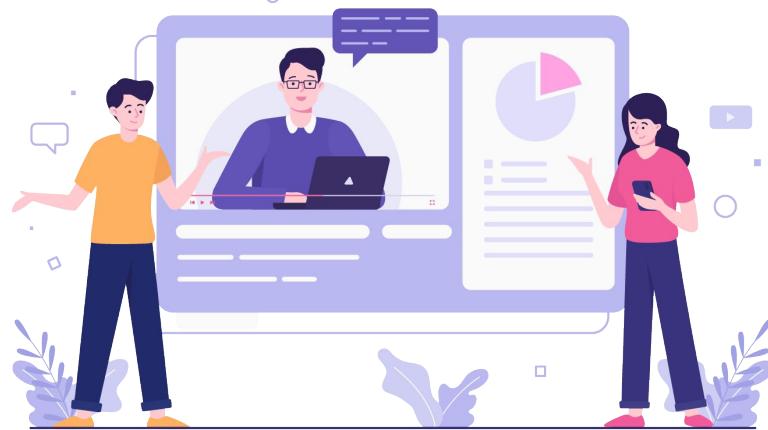
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THANK YOU





ALL THE BEST

