Data Management
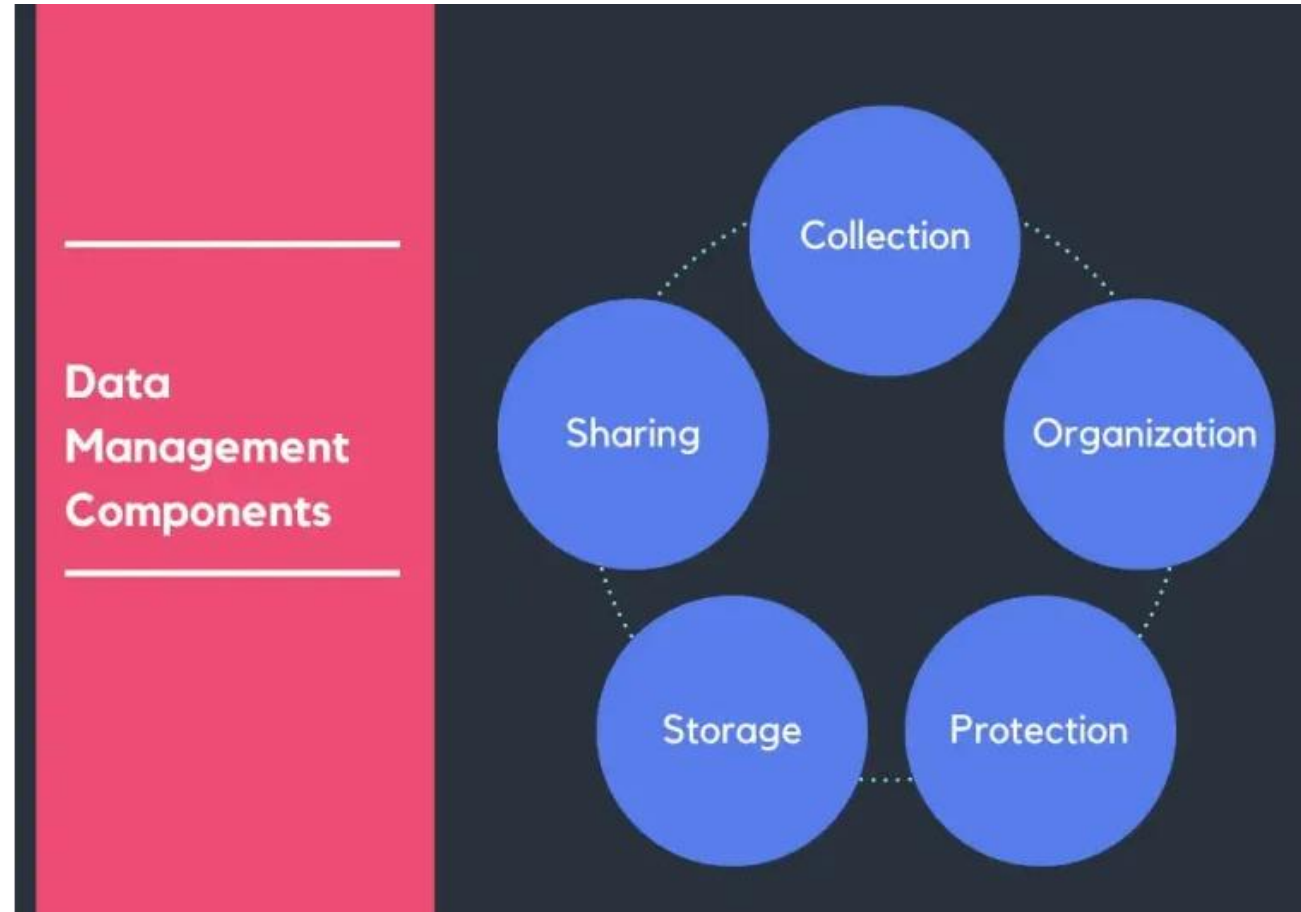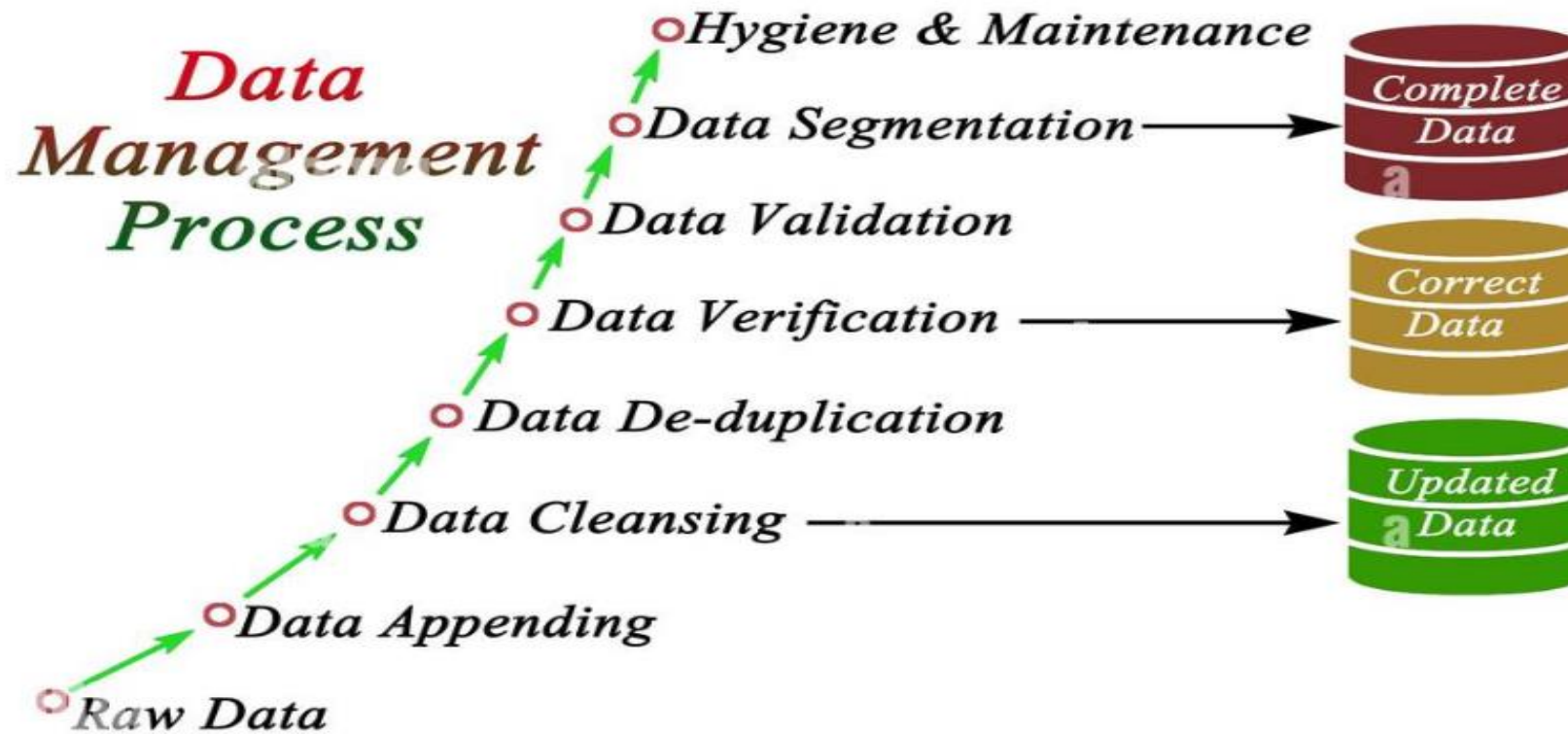
- collecting and analyzing raw datasets
- main goal is to help people
- optimize the use of data

Data Management Components

Data Management Process

- Hygiene & Maintenance
- Data Segmentation → Complete Data
- Data Validation
- Data Verification → Correct Data
- Data De-duplication
- Data Cleansing → Updated Data
- Data Appending
- Raw Data

Types of Data Management

Data Integration	Data Modeling	Data Storage	Data Catalogs
Data Processing	Data Governance	Data Lifecycle Management (DLM)	
Data Pipelines ETLs	Data Security	Data Architecture	

Importance of Data Management in business growth

- **Data management** is a set of practices for handling data collected or created by a company so that it can be used to make informed business decisions. The core idea behind the entire process is to treat data as a valuable asset — since that's precisely what it is.

    Well-designed data management processes can yield the following big benefits for your business.

    Overall productivity improvement. If meticulously organized, data management minimizes data movement, helps uncover performance breakdowns, and enables users to have all the necessary information a click away.

    Cost efficiency. With data management in place, a company can avoid unnecessary duplications and the employees won't do the same research or fulfill the same tasks again and again.

    Ability to rapidly respond to change. A company's success depends heavily on its ability to make the right decisions quickly in case of change. If it takes too long to react to market shifts or activities of competitors, the business is likely to lose money and miss opportunities. Organized data allows decision-makers to acquire vital information faster and respond appropriately.

    Enhanced accuracy of decisions. The more quality data you have, the bigger picture you see, and the better decisions you make. And vice versa, lack of information or errors in available data may lead to fatal business mistakes.

What is Data Visualization

- graphical representation of quantitative information
- graphs, charts, and maps
- convert large and small data sets into visuals
- understand outliers, patterns, and trends in the data.
- discover unknown facts and trends

Bar and column charts   observing relationships and making comparisons

pie chart   to show parts-of-a-whole

Class Activity   - 05 marks each

- Analyze the importance of data management

- Describe various components used in data management

- Outline data management process in brief.

- As a researcher what kind of types of data management one needs to consider? Explain in brief.

- According to you state the importance of data management with respect to medical research(in case of COVID COVISHIELD development)