

- **Data Latency:** Streamed data processing requires handling data with low latency to derive insights in real-time. The data model should be optimized for efficient data retrieval and processing.
- **Data Cleansing and Transformation:** Streamed data may have missing values, outliers, or errors. Data modeling should consider how to handle data cleansing and transformation during real-time processing.
- **Integration with Data Streaming Platforms:** Data models need to integrate seamlessly with data streaming platforms and technologies such as Apache Kafka, Amazon Kinesis, or Apache Flink.
- **Event Windowing:** In some cases, it may be necessary to group streamed data into specific time windows for aggregation and analysis. Data models should support event windowing operations.
- **Data Governance and Compliance:** Streamed data might have regulatory implications. Data modeling should adhere to data governance policies and ensure compliance with data protection regulations.

1)

Structured data

⇒ In this type of data, the data is stored in processed form.

⇒ This form of data is generally used to store quantitative data such as height, weight etc.

⇒ To store such types of data, data warehouses are used.

⇒ Several tools are available for mining structured data.

Unstructured data

⇒ In this type, the data is stored in unprocessed form.

⇒ This form of data is used to store qualitative data such as invoices, records and etc.

⇒ To store unstructured data, data lakes are used.

⇒ No tools are present currently for mining unstructured data.

2) Lookup table includes values you define, used as a reference to search & match elements across your code. That values doesn't change frequently so the data is static data.

3) Advantages

⇒ Simple & straight forward to use

⇒ Quick & efficient for retrieving results based on specific keyword matches.

⇒ Familiar & widely supported across search engines & system.

⇒ Identifies new trends.

4) Simulation model

A simulation model is mathematical business model which combines both mathematical & logical concepts that tries to emulate a real life system.