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Task 2: Data and Metadata

1. What is Data?

• Data refers to raw facts and figures that can be processed by a computer. It can take the form of numbers, text, images, audio, etc.

2. What is Information?

• Information is processed data that has been given meaning and context, making it useful for decision-making.

3. Difference Between Data and Information:

• Data is unprocessed and lacks context, while information is processed data that provides insights or conclusions. For example, “100” is data, whereas “$100 in sales” is information.

4. What is Metadata?

• Metadata is data that provides information about other data, giving context and structure to data.

5. Why Do We Need Metadata?

• Metadata helps us understand the source, format, and meaning of data, facilitating better data management and retrieval.

Task 3: Data Protection

1. What is Data Privacy?

• Data privacy refers to the rights and expectations of individuals regarding the control and protection of their personal information.

2. Key Elements for Maintaining Data Privacy Compliance:

• Practices: Data encryption and access controls.

• Rules: Regulations such as GDPR (General Data Protection Regulation).

• Guidelines: Data processing policies.

• Tools: Data Loss Prevention (DLP) software.

3. Importance of Data Privacy:

• For Individuals: Protects personal information and helps prevent identity theft.

• For Businesses: Maintains customer trust, complies with laws, and avoids fines.

4. Differences in Data Privacy for Individuals and Businesses:

• Individuals focus on personal information security, while businesses are more concerned with compliance and operational security.

Task 4: Database Security

1. Definition of Database Security:

• Database security encompasses measures and tools to ensure that database systems and the data they contain are protected from unauthorized access and corruption.

2. Measures to Keep Databases Secure:

• Use of firewalls and intrusion detection systems.

• Implementation of access controls and encryption.

• Regular backups and updates of databases.