INDIVIDUAL TASK 2

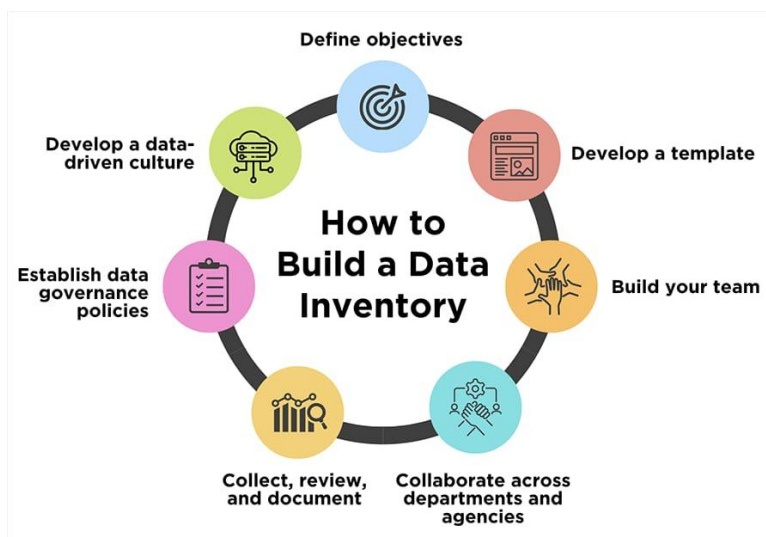## 2.Explain my daily data inventory:-

1.<u>Introduction</u>:-

>A daily data inventory is a systematic process of tracking, recording, and monitoring all data assets generated, received, or processed within an organization on a daily basis.

>The primary purpose of maintaining a daily data inventory is to ensure data accuracy, consistency, and accessibility for operational, analytical, and compliance needs.

>It allows teams to identify data gaps, monitor usage patterns, and maintain data quality standards, supporting informed decision-making and regulatory compliance.

>By performing a daily review of data assets, organizations can proactively manage data storage, detect anomalies, and streamline reporting processes, ultimately enhancing operational efficiency and data governance.

<u>2. Importance of Daily Data Inventory:-</u>

1. Enhanced Data Governance

Maintaining a daily inventory ensures that organizations know what data exists, where it resides, and who owns it. This visibility is critical for:

- Tracking sensitive data
- Maintaining regulatory compliance (e.g., GDPR, HIPAA)
- Preventing unauthorized access or data leaks

2. Improved Data Quality

By reviewing data daily, organizations can:

- Detect inaccuracies, duplicates, or inconsistencies quickly
- Validate updates and corrections in real time

- Ensure reporting and analytics rely on trustworthy and current data

3. Efficient Decision-Making

Accurate, up-to-date data enables leaders and teams to make:

- Faster, informed decisions

- Proactive responses to trends or anomalies

- Better forecasting and planning

4. Regulatory Compliance & Audit Readiness

Many regulations require organizations to know their data flows and maintain records of sensitive information:

- Daily inventories provide a ready log for audits

- Reduce the risk of fines or legal repercussions

- Help demonstrate due diligence in handling personal or critical data

Detailed Framework:-
1. Identify Data Sources

- All internal databases (CRM, ERP, HR systems)

- Cloud storage (AWS S3, Google Drive, Azure Blob)

- External sources (APIs, partner data feeds)

2. Catalog Data Types

- Structured data (tables, spreadsheets)

- Unstructured data (emails, PDFs, multimedia)

- Semi-structured data (JSON, XML logs)

3. Track Data Attributes

- Name / Description

- Owner / Responsible Team

- Source / Origin

3.Types Of Daily Data Inventory:-

1 Operational Data Inventory

Purpose: Monitor daily system activity and data flow.

- Data ingestion and processing volumes

- ETL jobs and pipelines

- System uptime and errors

- Backup completion status

Benefit: Ensures systems run smoothly and data pipelines are functioning correctly.

2 Data Quality Inventory

Purpose: Track accuracy and reliability of data.

- Missing values
- Duplicate records
- Data consistency across systems
- Validation errors

3 Compliance & Regulatory Inventory

Purpose: Ensure regulatory adherence.

- Personally Identifiable Information (PII)
- Sensitive or classified data
- Data retention periods
- Encryption and access controls

Benefit: Reduces risk of fines, legal action, and data breaches.

4 Security Data Inventory

Purpose: Monitor access and protect against threats.

- Access logs
- Permission changes
- Unauthorized attempts
- Data movement or transfers

Benefit: Strengthens security posture and incident response readiness.

4.Real Life Examples:-

1 Banking Sector Example

A commercial bank tracks customer transactions daily.

- Total transactions processed
- Failed transactions
- New customer accounts opened

Real-life context: Major banks like JPMorgan Chase perform continuous transaction monitoring and daily reconciliations to ensure data integrity and compliance.

2 Hospital / Healthcare Example

A hospital tracks patient records daily.

- New patient registrations
- Electronic health records updated
- Lab results uploaded

Real-life context: Systems used by organizations like Mayo Clinic rely on strict daily data monitoring to safeguard patient data.

3 E-Commerce Company Example

An online retailer tracks sales and customer activity daily.

- Orders received
- Payment confirmations
- Inventory updates

Real-life context: Companies like Amazon continuously monitor inventory, transactions, and logistics data daily.

4 University / Educational Institution Example

A university monitors student data daily.

- Attendance records
- Exam results entered
- New admissions

Real-life context: Institutions like University of Oxford manage large volumes of academic and administrative data requiring regular tracking.

5.Conclusion:-

>Daily data inventory is a critical practice that ensures organizations maintain full visibility, control, and accountability over their data assets.

>In today's data-driven environment, information is constantly created, updated, transferred, and stored across multiple systems.

>Without daily tracking, organizations risk data loss, security breaches, compliance violations, and poor decision-making.

>In simple terms, a daily data inventory is not just a record-keeping activity—it is a strategic tool that protects data, improves quality, and builds trust in organizational systems.