|  |  |  |
| --- | --- | --- |
| **Arjun Mehta** | **K036** | **B. Tech CSE Cybersecurity** |
| **21-01-2025** | **Semester 4** | **DWM LAB 3** |

**Case Study: N-iX - A Leading European IT Company**

**Dimension**

For N-iX, a prominent European IT company, the dimensions in a star schema could include:

* **Customer**: Client name, industry (e.g., fintech, logistics, retail), location.
* **Service**: Type of service provided (e.g., cloud solutions, AI/ML development, data analytics).
* **Geography**: Country, region, city where services are delivered.
* **Time**: Project start date, end date, year, quarter.

**Facts**

The measurable data points for N-iX might include:

* **Revenue**: Total revenue generated per project or client.
* **Project Count**: Number of projects completed in a specific timeframe.
* **Employee Utilization**: Percentage of tech experts allocated to projects.
* **Customer Retention Rate**: Percentage of repeat clients.

**Business Subjects**

Key business subjects for N-iX could involve:

* **Project Delivery**: Timely and efficient completion of IT projects.
* **Client Satisfaction**: Ensuring high-quality deliverables and customer retention.
* **Service Portfolio Expansion**: Focus on emerging technologies like Generative AI and VR/AR.
* **Market Penetration**: Growth in new regions like Poland, Bulgaria, and beyond Europe.

**Data Granularity**

N-iX operates at varying levels of data granularity:

* **High Granularity**: Detailed logs of individual project activities (e.g., hours worked by each employee).
* **Medium Granularity**: Monthly summaries of completed projects and associated revenues.
* **Low Granularity**: Annual performance metrics across different industries and regions.

**Benefits of Star Schema for N-iX**

1. **Streamlined Reporting**:
   * Simplifies the process of generating reports on project performance, revenue trends, and client satisfaction metrics.
2. **Enhanced Query Performance**:
   * Reduces query execution time by minimizing complex joins between tables.
3. **Ease of Understanding**:
   * The intuitive structure helps both technical teams and business stakeholders comprehend data relationships easily.
4. **Scalability**:
   * New dimensions (e.g., emerging markets or services) can be added without disrupting the existing schema.
5. **Support for Business Intelligence (BI)**:
   * Facilitates advanced analytics using tools like Power BI or Tableau to derive actionable insights from data.
6. **Improved Decision-Making**:
   * Enables leadership to identify high-performing industries or regions and allocate resources effectively.