# Team-Based Project: Exploring Use Cases from Graph Databases

**Objective**: This team-based project will explore the top five use cases from “The Top 5 Use Cases of Graph Databases”. Each team will focus on a specific use case, develop a concept, create a Neo4j database, and write Cypher queries to explore the dataset. The project emphasizes teamwork, database design, and querying while encouraging innovative approaches to real-world problems.

### Team Assignments:

* **Team 1**: Use Case 1 - Fraud Detection
* **Team 2**: Use Case 2 - Real-Time Recommendation Engines
* **Team 3**: Use Case 3 - Master Data Management
* **Team 4**: Use Case 4 - Network and IT Operations

### Project Requirements:

1. **Concept Development**:
   * Each team will be assigned a specific use case (e.g., fraud detection, real-time recommendations, etc.).
   * Based on the assigned use case, the team should develop a **concept** for their project. This concept should explain how a graph database can be applied to the use case, highlighting the key entities, relationships, and potential challenges.
2. **Database Creation**:
   * Using **Neo4j**, each team will design a database structure based on their use case. This should include all relevant nodes (entities) and relationships identified in the concept.
   * Populate the database with sample data that effectively illustrates the use case.
3. **Cypher Queries**:
   * Write **15 Cypher queries** to retrieve useful insights from the database. These queries should be practical and closely aligned with the team’s use case. For example, queries could detect fraudulent behaviour, recommend products, or optimize network performance.
4. **Presentation and Screencast**:
   * Each team will prepare a **10-minute presentation** to showcase their concept, database structure, and Cypher queries. Key queries should be demonstrated live.
   * A **Q&A session** will follow each presentation.

### Deliverables (per team):

1. **Team PowerPoint slides** for your presentation.
2. A **Cypher script** that creates your Neo4j database and includes 15 relevant queries.
3. A **Word document** with screenshots of the nodes in your database and the output/answer for each Cypher query.
4. A **Screencast (MP4 video, 5-7 minutes)** demonstrating your Neo4j database and queries, with voice narration explaining the project’s key findings.