Assignment 4: Graph Databases

Objective

The Danish sports technology is experiencing significant growth, and the Danish Sports Confederation (DIF) expects big export success in the near future (see https://nyheder.tv2.dk/business/2022-04-16-dansk-branche-i-taarnhoej-vaekst).
This assignment provides you with experience in implementing graph database technologies for storing data and retrieving information with a potential benefit for sports.

Tasks

In this Github repository (https://github.com/metrica-sports/sample-data) you will find materials related to measuring individual players' performance in a team sport – in this case, football.

- There are sample data sets collected from three games of football - choose one of them.
- Build a graph model that represents best the *event* data of the game and enables efficient searches in it.
- Create graph database and store the data in it.
- Apply `Cypher` queries, graph algorithms, libraries, and procedures for data analysis that would support answering questions, such as
    - who is the most active player (in terms of passing and receiving the ball)?
    - who has had a central role in the match?
    - which players have attempted to score?
    - which team has kept the ball longer?
    - is there any close 'societies' between players (passing the ball to each other)?
    - how close is the connection between two specific players?
    - …
- Use graph visualization as much as appropriate.

Submit the solution in your `Github` repository and a link to it in `Peergrade`.

This is a group project, the solution of which provides 20 study points.