College of Engineering and Physical Sciences | School of Computer Science

Full Stack Application Development [06 34252]

YiCS – Software Workshop 2 [06 34169]

Software Workshop 2 [06 34157]

Full Stack Application Development (Dubai) [06 34236]

Software Workshop 2 (Dubai) [06 34188]

Week 9 Lab Exercises

Topic: Graph Databases 01

Graph Databases

a) What is the key difference in the definition of a relationship, between Relational and Graph Databases?

b) Describe "white-boarding" and why it delivers a more effective design approach when using a Graph database approach.

c) A node representing a student called Art Grayson and with an SRN of 19873423 has already been created on a graph database

Person   <id>: 3   SRN: 19873423   name: Art Grayson

Using Cypher, show the creation pattern for a node linked to this student node representing a module object type with two properties

- Name – "Multi-User Databases"
- Module-Leader – "Paul Morris"

By using a suitable directional relationship "Enrolled_On" from the student node to the module node.

Displaying 2 nodes, 1 relationships.
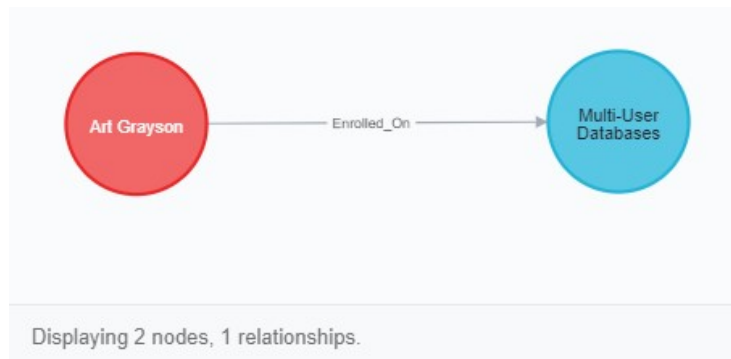
a) Neo4J delivers Index Free Adjacency as part of its Graph Processing Engine. How does Neo4J support this?

b) Using the E-R diagram provided, construct a graph-based model from the diagram.
Specialist transport indicates if the transport of the instrument requires a specialist removal company.