

CMPINF 2110

Spring 2021

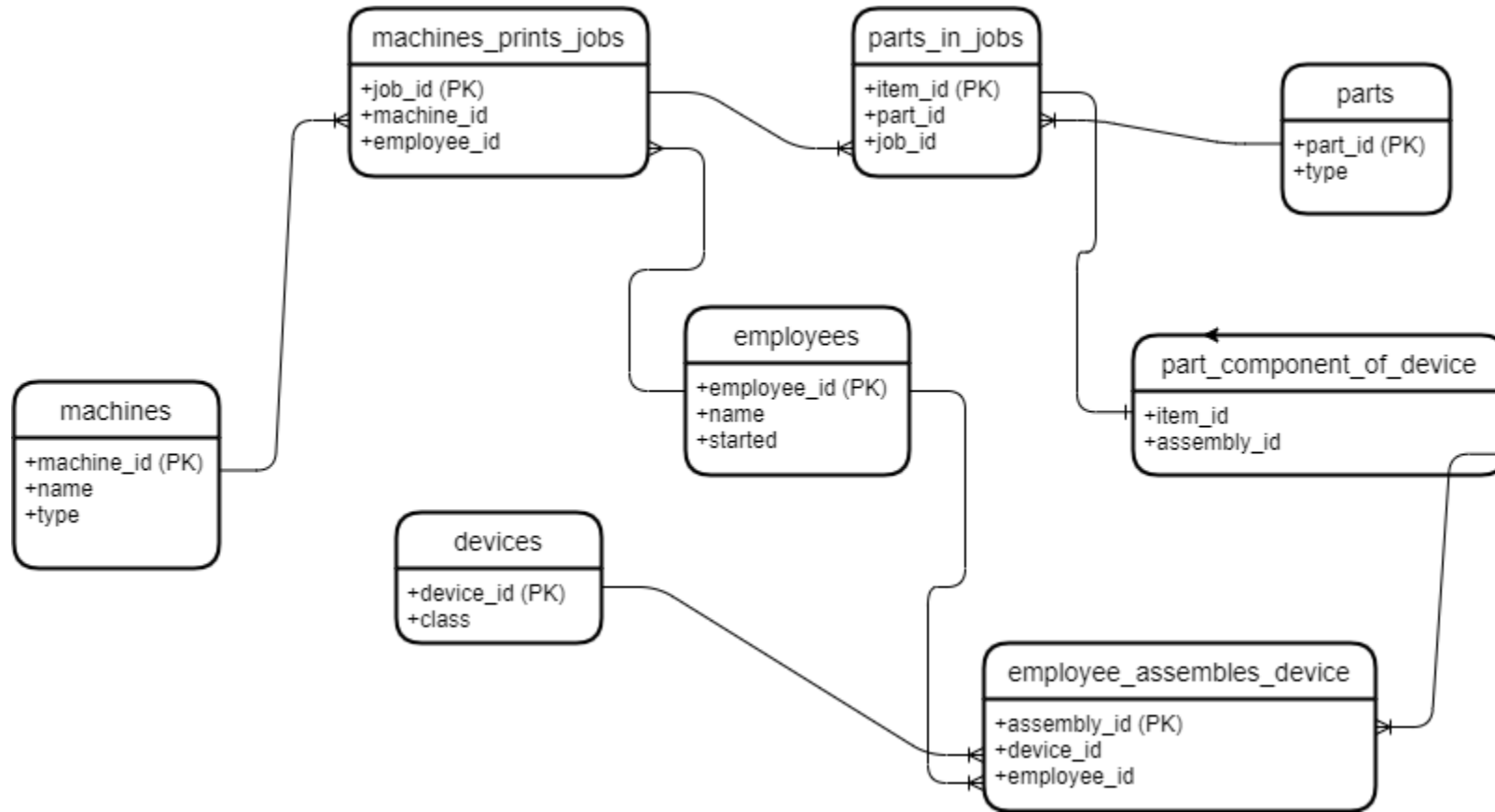
Homework 06

Instructions

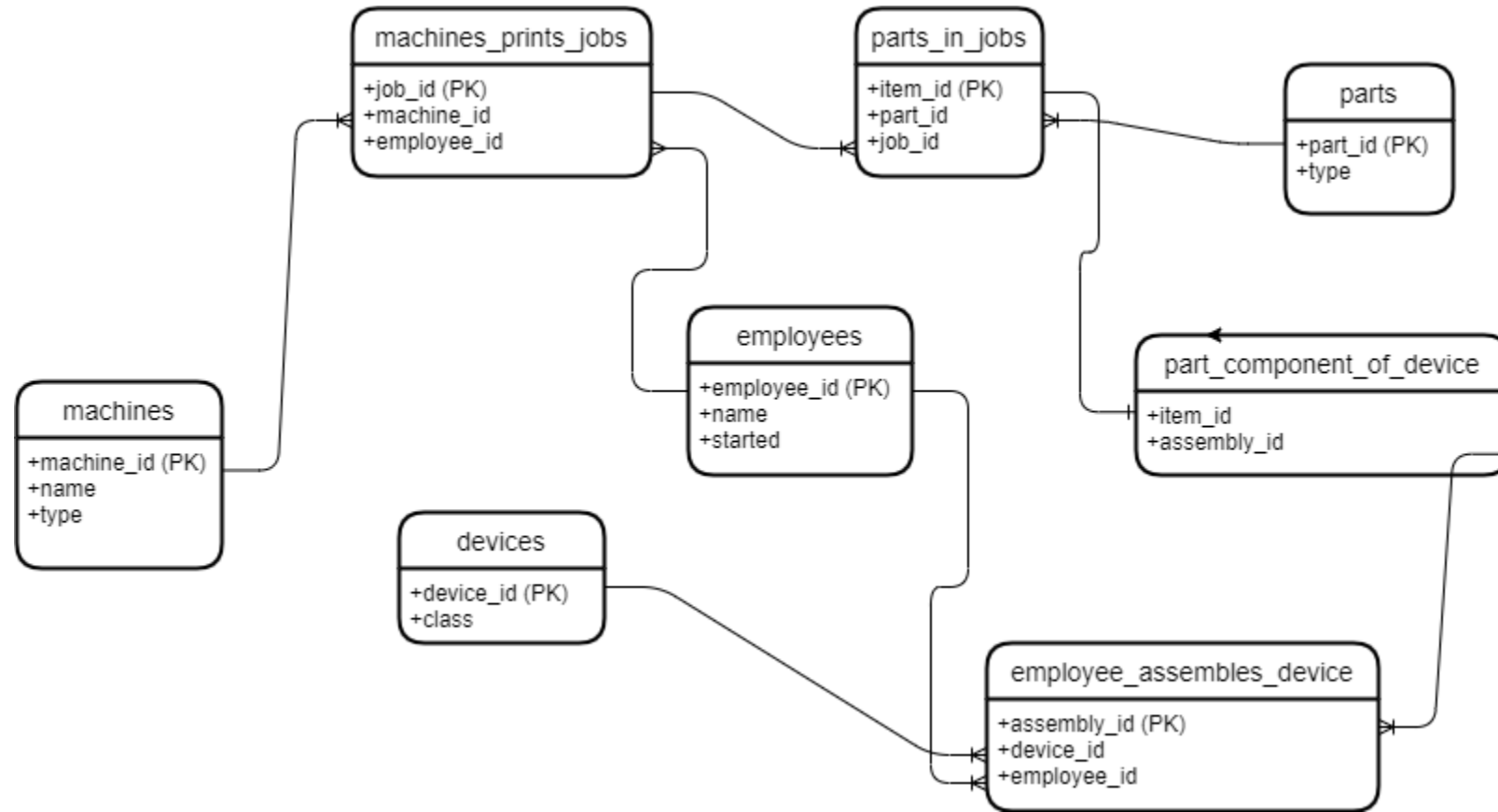
You will convert a relational data model into a graph data model

- You will build off from the 3D printed parts example from Homework 05 and consider more prints, more parts, more jobs, and employees.

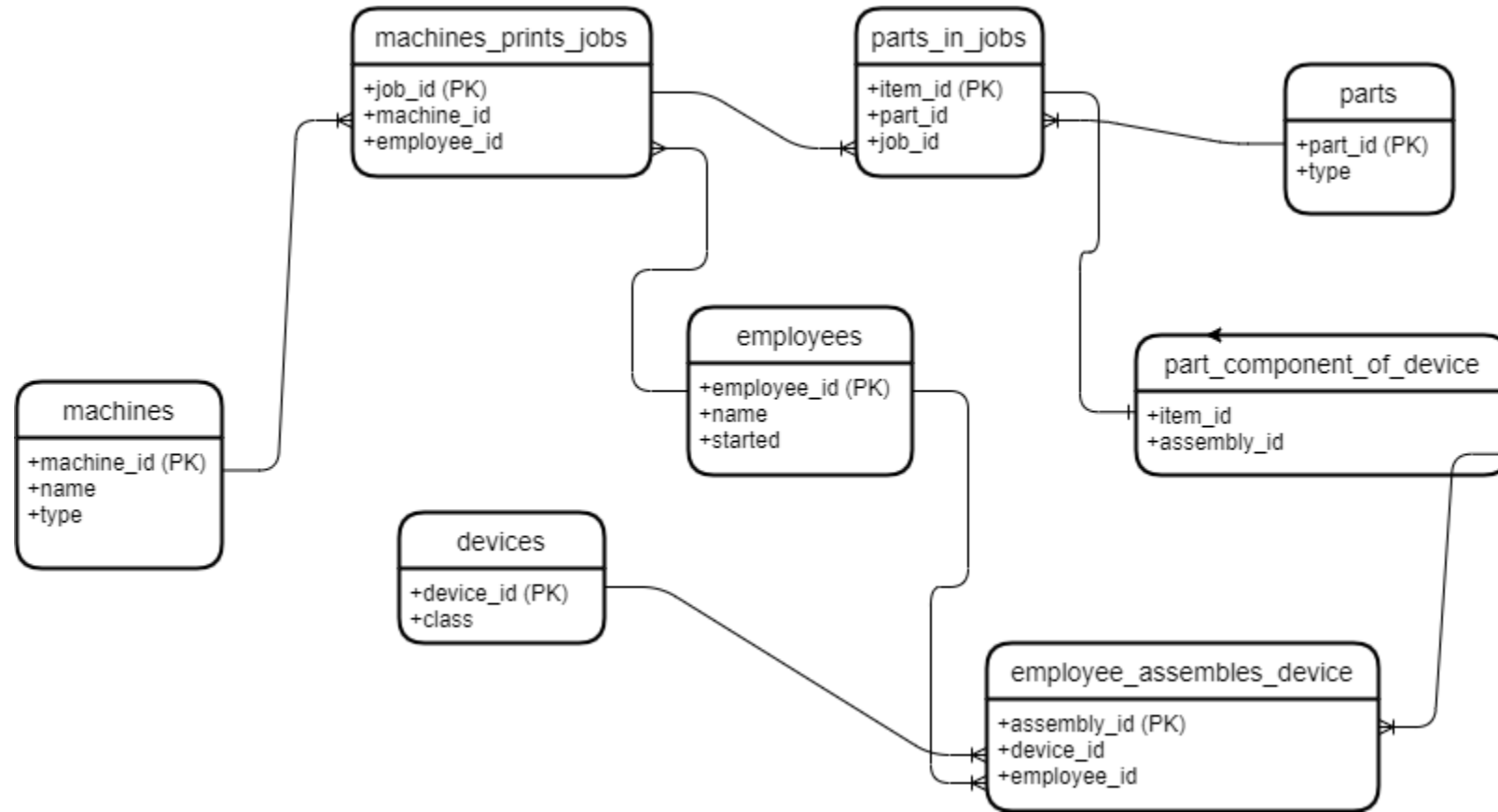
The relational data model is shown below



Primary Keys are indicated by PK. Data types are not given for simplicity.



Link table names provide representative NOUNS and VERBS



All data for the assignment can be found in the following Github repo

- https://github.com/jyurko/CMPINF_2110_Spring_2021_data/tree/main/hw06
- To download, click on a CSV file then choose “RAW”.
- For example, the “raw” devices.csv file is:
- https://raw.githubusercontent.com/jyurko/CMPINF_2110_Spring_2021_data/main/hw06/devices.csv

For your assignment you must:

- Convert the relational data model into a Graph Data Model.
- Import the data from the 8 CSV files into a Graph Data Model in Neo4j.
- The table names give you appropriate NOUNS and VERBS to use for Labels and Relationship Types.

For your assignment you must:

- Once you have imported all data and defined appropriate Nodes and Relationships, you must:
- Visualize the Graph Data Model schema.
- Query all nodes related to the job_id = 3 Job.
- Count all parts in job_id = 3.
- Query all nodes related to the Employee Alice.
- Count all devices assembled by Employee Chuck.
- Count all parts printed by the Machine delta.
- Save the visualization associated with your queries and submit your query images within a Powerpoint, PDF, or Word file.
 - Submit your images to Canvas.
- Save the result of the query of all nodes related to job_id =3 as a CSV file and submit your CSV file to Canvas.