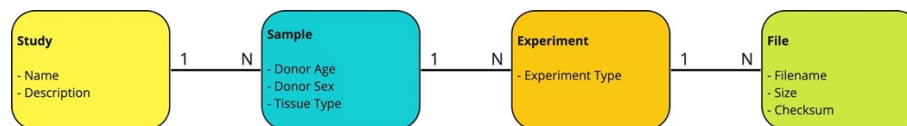


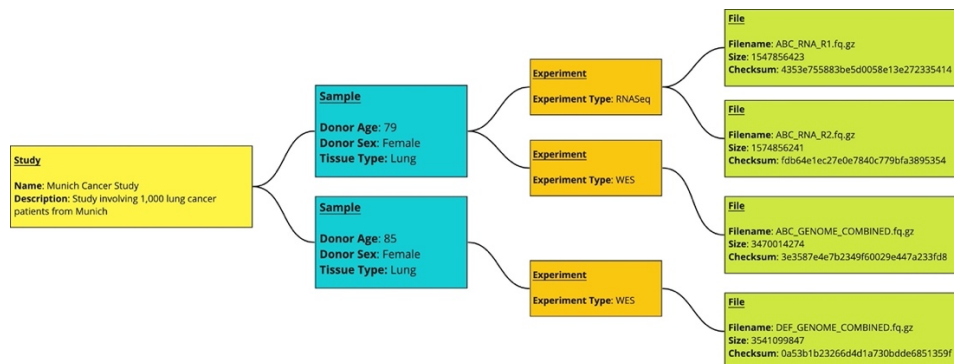
# GHGA Software Developer Technical Challenge

An important aspect in archiving genomic data is the associated metadata, i.e. information about the samples that were analyzed, the experiments that were conducted etc. Without the metadata the archived genomic data is not useful for research purposes.

Assume the following entities, attributes and entity relationships representing a simplified metadata model:



An example study with two samples, three experiments and four files may look as follows:



## Task

1. Design a RESTful API to create and read the entities shown above.
2. Implement the API using a Python webframework of your choice such as FastAPI, Django or Flask. Other technologies such as database technologies can be freely chosen by the developer.
3. Implement a command line interface to import data from a JSON file.
4. *Bonus* Develop a basic web interface that communicates with the REST API and displays the data.

**Note:** The idea behind the technical challenge is to understand the design principles and development methodology used by the developer. The developer is not expected to demonstrate mastery over the technological domains involved in the task, but to show a good level of understanding of them as well as to follow best practice programming principles.