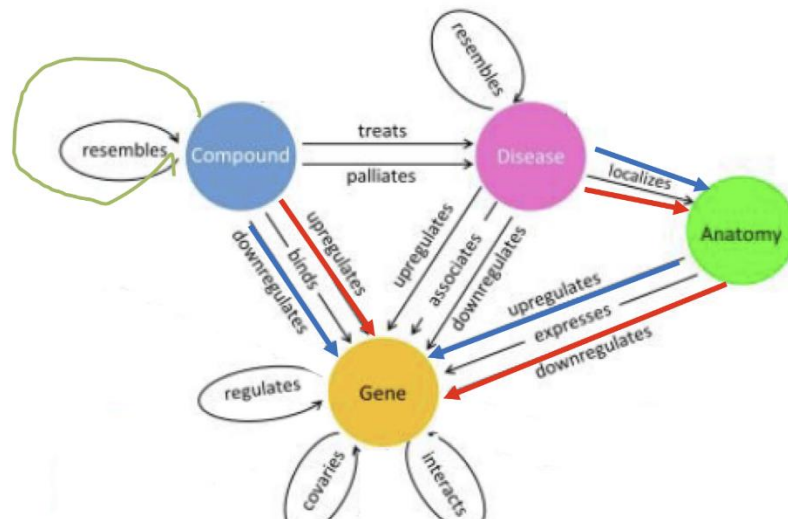


Project I: Requirement

- Build a database system to model *HetioNet*
- The database should at least answer the following questions in the **quickest response time**

1. Given a disease id, what is its name, what are drug names that can treat or palliate this disease, what are gene names that cause this disease, and where this disease occurs? Obtain and output this information in a single query.

2. We assume that a compound can treat a disease if the compound or its resembled compound up-regulates/down-regulates a gene, but the location down-regulates/up-regulates the gene in an opposite direction where the disease occurs. Find all compounds that can treat a new disease name (i.e. the missing edges between compound and disease excluding existing drugs). Obtain and output all drugs in a single query.



Project I: Requirement

- A Python command-line client interface for database creation and query
- Use at least two types of NoSQL stores (Key-value, Document, Column Family, or Graph)