Logos : A Graph-based Model for SQL-to-NL

Logos in a nutshell:
1. The SQL query is modeled as a graph.
2. For all node- and edge- types:
   - Default labels.
   - Custom labels.
3. Templates are used to synthesize explanations over parts of the query graph.
4. Synthesis as a graph traversal.

Pros:
- Highly precise explanations.
- A white-box translation model for SQL queries.

Cons:
- Explanations depended on query’s syntax.
- Complex queries (e.g., with many attributes) lead to unnatural explanations.

```
SELECT t1.country_name
FROM countries t1, institutions t2
WHERE t1.unics_id = t2.country_id AND t2.name = "Athena";
```

Find countries having institutions whose name is Athena.