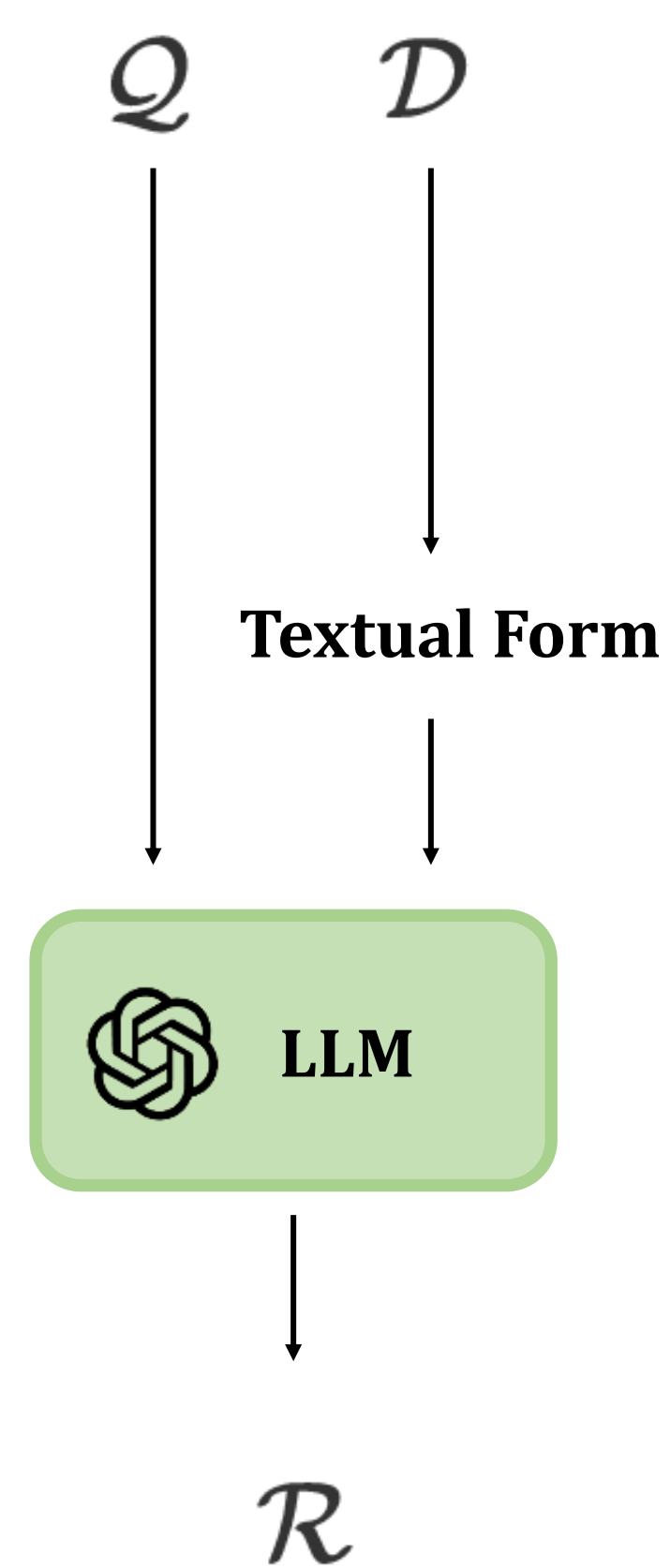
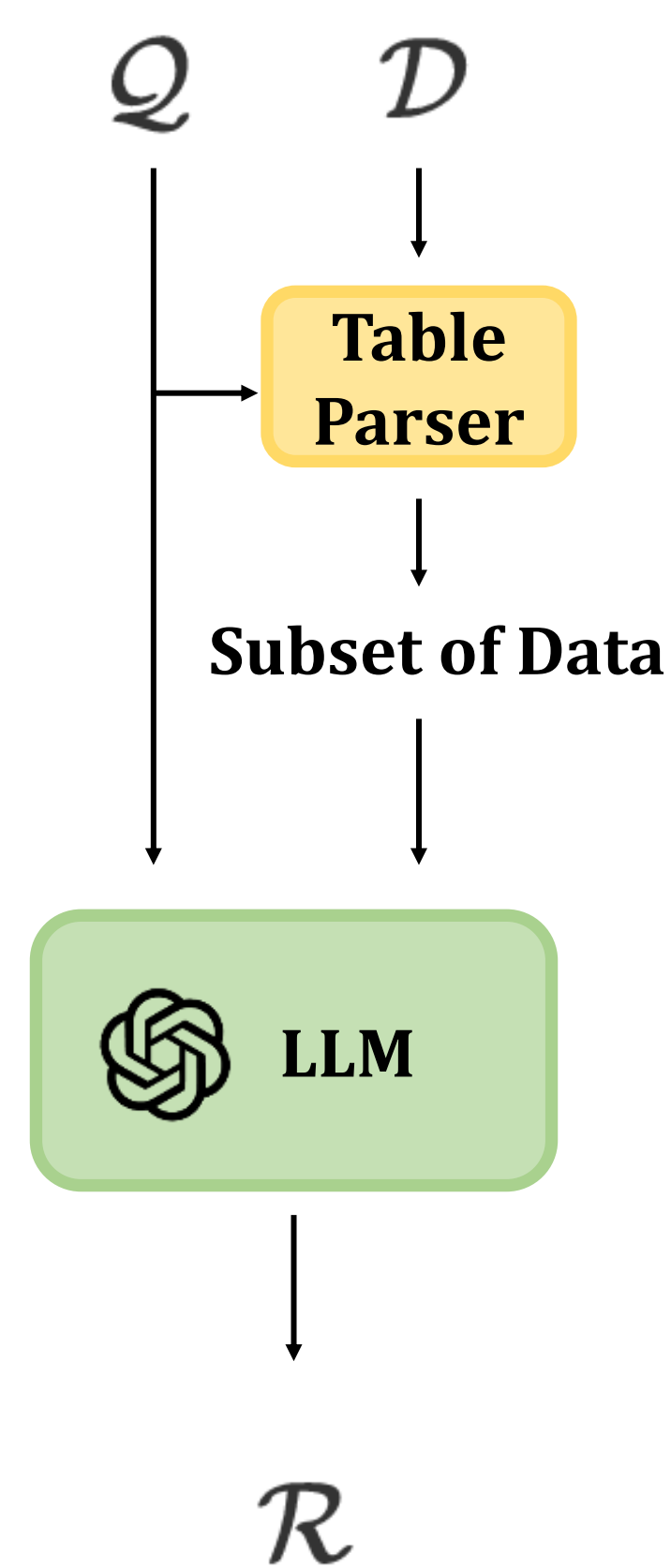
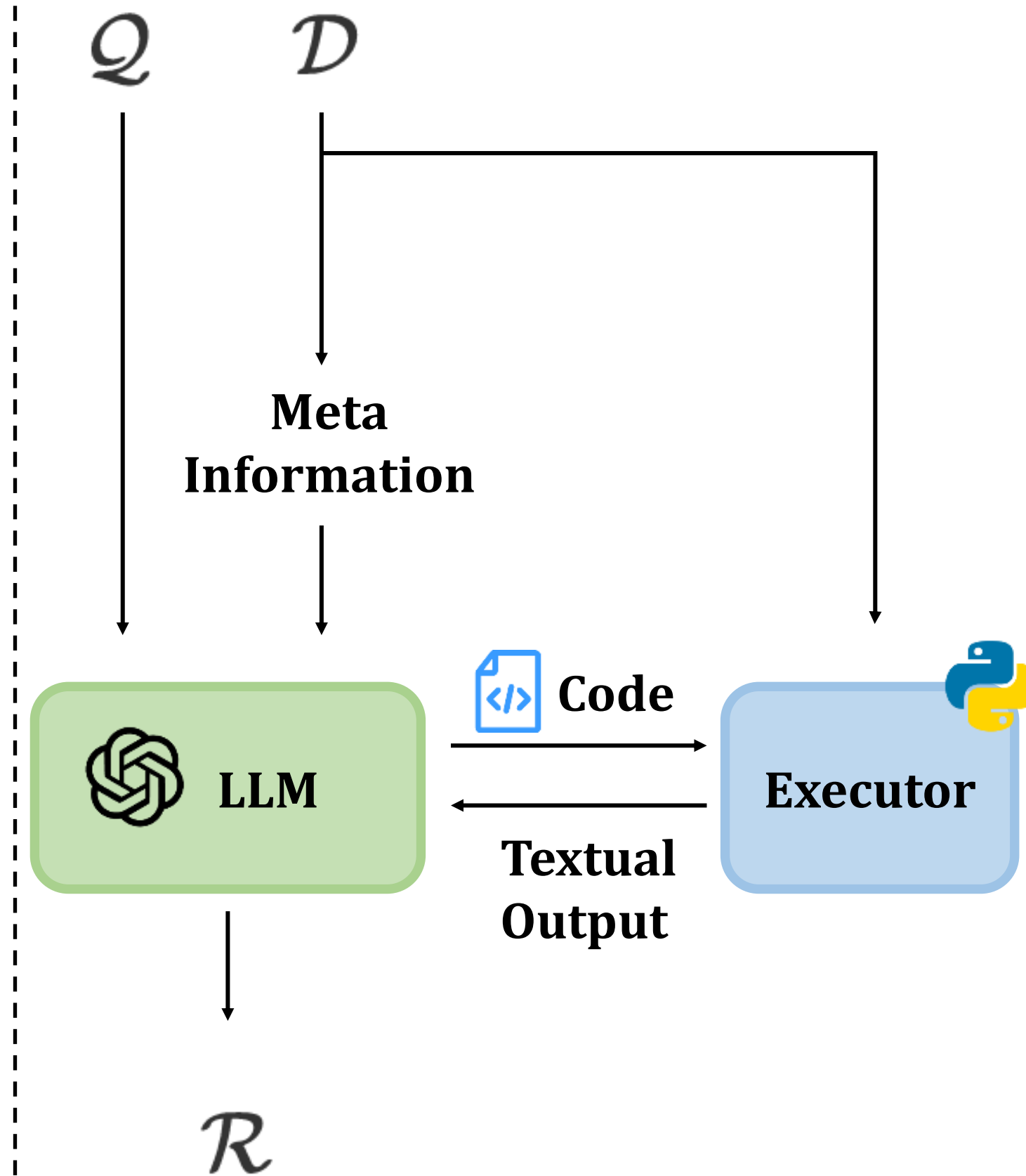


\mathcal{Q} : User Query \mathcal{D} : Database \mathcal{R} : Model Response for Data-Driven Insights

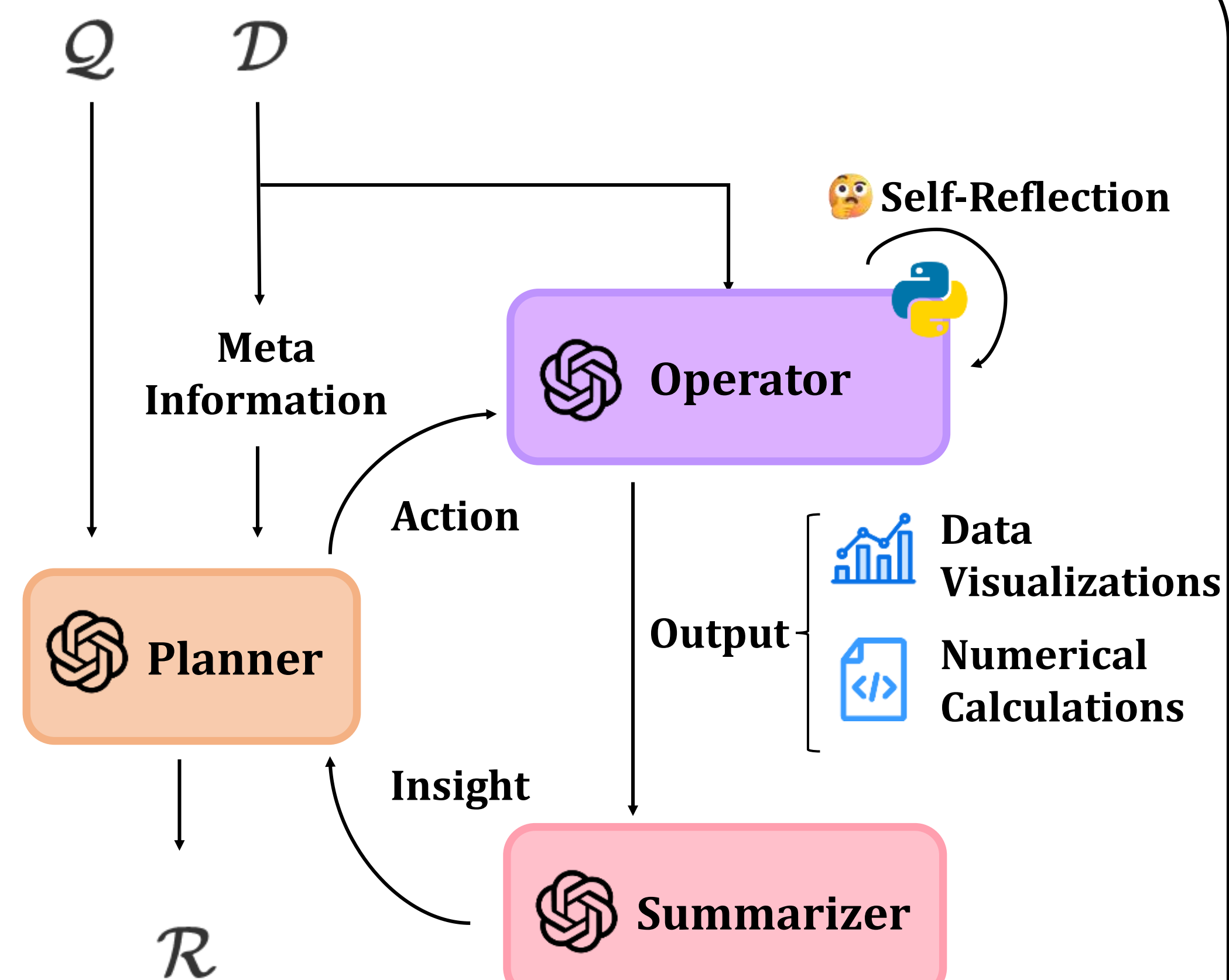
(a) Naïve LLM-Only



(b) TableQA



(c) ReAct



(d) Argos (ours)

- ✓ Simple
- ✗ Monolithic Architecture
- ✗ Numerical Calculation
- ✗ Long Context for Table Representation

- ✓ Controllable Context
- ✗ Monolithic Architecture
- ✗ Numerical Calculation
- ✗ Information Lossy when Parsing Tables

- ✓ Reliable Numerical Calculation
- ✗ Monolithic Architecture
- ✗ Underutilized Visual Reasoning
- ✗ Long Context for Multi-round Conversation
- ✗ Fragile Error Handling

- ✓ Role-based Multi-Agent Architecture
- ✓ Incorporate both Programmatic and Visual Reasoning
- ✓ Robust Error Handling through Reflection
- ✓ Efficient Context Management