**HealthMate AI Diagram: Builder Design Pattern**

The Builder Design Pattern effectively separates diagram construction from representation within HealthMate AI. This promotes code reusability and adaptability for future diagramming needs.

Key Elements

* Diagram Interface:
  + Defines the structure and methods for diagrams within HealthMate AI.
  + Ensures consistency and abstraction across different diagram types.
* DiagramBuilder Interface:
  + Outlines steps for constructing diagram elements (shapes, lines, text).
  + Promotes modularity and reusability by defining a shared interface.
* ConcreteBuilder Classes:
  + Implement the DiagramBuilder interface to create specific diagram types:
    - CarePlanBuilder
    - PatientRecordBuilder
    - RecommendationSummaryBuilder
  + Encapsulate construction logic for each diagram type.
* HealthMateAI Class:
  + Acts as the director, controlling diagram construction using builders.
  + Initiates the process and specifies desired diagram type.
* HealthMateDiagram Class:
  + Concrete implementation of the Diagram interface.
  + Represents the final constructed diagram, containing diagram data and structure.

Construction Process

1. HealthMateAI selects the appropriate ConcreteBuilder based on the desired diagram type.
2. HealthMateAI calls methods on the ConcreteBuilder to construct diagram elements sequentially.
3. ConcreteBuilder instances create and assemble shapes, lines, and text elements.
4. ConcreteBuilder returns a HealthMateDiagram object representing the completed diagram.