: What is a data modeler?

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In the era of rapidly expanding, diverse data, someone needs to identify patterns and regularities in the data streams. For many years, we have been modeling data into hierarchies, networks and relations. Now data modelers have more unstructured data which contain meaning if patterns can be identified. What does a data modeler do? A senior data modeler architects, refines, standardizes and communicates to internal business users the data a specific business/organization uses currently and that it captures and could use and might need. These Information Systems professionals use data models to determine the structure and pattern of data that is, might be, and will be needed and how to best organize and retrieve data.

The focus of data modeling is on preparing "static" data models. A data modeler focuses on what data is required and how it should be organized. The data modeler identifies the "data things" related to the purpose of the data modeling project, the attributes or features of "the data things", and relationships among the "data things". Once identified the model should be stable and show little change. A database analyst examines the dynamics of the "as is" and "will be" systems, the data flow models, and the system context diagram and other analytical models of the existing and proposed system. The broader the database scope the more modeling that should occur.

Dictionary.com defines a data model as a product of a database design process. Data models are outcomes of analysis. "A data model says what information is to be contained in a database, how the information will be used, and how the items in the database will be related to each other." The database might be flat files, tables or some other data structure. Dictionary.com asserts "One of the most widely used methods for developing data models is the entity-relationship model. The relational model is the most widely used type of data model."

webopedia.com explains data modeling as "the analysis of data objects and their relationships to other data objects. Data modeling is often the first step in database design and object-oriented programming as the designers first create a conceptual model of how data items relate to each other. Data modeling involves a progression from conceptual model to logical model to physical schema." Wikipedia defines data modeling as "a process used to define and analyze data requirements needed to support the business processes within the scope of corresponding information systems in organizations."

Salary.com identifies the primary responsibilities of a data modeler as "data standards and procedures, warehousing, design and development of logical and physical data models and databases, distributed data management, information management functions." The Data Modeler

"develops data models to meet the needs of the organization's information systems and business requirements; communicates with other teams on the development of data models."

The web page at http://skills.salary.com/Job/Data-Modeler lists many typical tasks in the job or role description of a data modeler. The job is varied and increasingly important. A data modeler should expect and be comfortable with a "wide degree of creativity and latitude". A few key job responsibilities include: 1) planning data collection methods, data cleansing, and as appropriate normalization of enterprise data to support decision making and reporting; 2) developing policies and procedures related to new and ongoing data collection and information systems to ensure the integrity of data; 3) coordinating data models, dictionaries, and other database documentation across multiple applications; and 4) working with data transformation teams to ensure that the model design and development is properly communicated.

Data Modeler [day-tuh mod'el uhr] is an English noun phrase for a job title derived from the Latin words datum, meaning something given, and modulus, meaning a unit of measure or standard, extent, quantity, or manner; **Definition:** A person who architects, refines, standardizes and communicates the business of an enterprise/organization to stakeholders through the use of graphical representations (drawings) and other mathematically based, standardized modeling approaches. From a tongue-in-cheek perspective suggested by an Embarcadero Technologies promotional t-shirt, the
Synonyms for Data Modeler: Data god, Data guru; **Antonym:** Application developer; **Usage:** "Kneel before the portal of the data modeler, sinner."

A data modeler organizes, structures, analyzes, explains, and understands data and its possible uses.

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