

DATA MODEL

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The Data Model is generally used to design the database used during the software execution process. This data model determines how the data required are retrieved or stored on the system, for future use. It provides an abstract model that organizes the business data for communication between functional and technical people. It is used to show the data needed and created by the data process.

There are various types of data models, in use:

- Flat model: This may not strictly qualify as a data model. The flat (or table) model consists of a single, two-dimensional array of data elements, where all members of a given column are assumed to be similar values, and all members of a row are assumed to be related to one another.
- Hierarchical model: In this model data is organized into a tree-like structure, implying a single upward link in each record to describe the nesting, and a sort field to keep the records in a particular order in each same-level list.
- Network model: This model organizes data using two fundamental constructs, called records and sets. Records contain fields, and sets define one-to-many relationships between records: one owner, many members.
- Relational model: is a database model based on first-order predicate logic. Its core idea is to describe a database as a collection of predicates over a finite set of predicate variables, describing constraints on the possible values and combinations of values.
- Object-relational model: Similar to a relational database model, but objects, classes and inheritance are directly supported in database schemas and in the query language.
- Star schema is the simplest style of data warehouse schema. The star schema consists of a few "fact tables" (possibly only one, justifying the name) referencing any number of "dimension tables". The star schema is considered an important special case of the snowflake schema.

As this is a development platform and not a database platform, we will not be concerned with any high level complexity that is brought about by hierarchical, network, relational, or other models. And will just stick with Flat model, for data storage on Disk or RAM.

1. The ASM program written within the IDE is saved to a plain text file, which can be read using any available text editor. It is in ASCII format.
2. The output generated by the Assembler, is 8 bit hexadecimal stream, which is directly loaded in executable memory.
3. The Assembler can also save the generated binary in a plain text file in Intel HEX format. Which can be easily be opened and viewed with Text editor. And is also compatible for direct transfer to

the 8085 kit using Serial COM port. This Hex file can also be loaded into the simulator, at a later time and be executed.

4. The Memory dump file is an XML file, generated by the Serialization API of Microsoft .NET framework. It can be reloaded to the simulator at any time and execution will resume from that state. It can also be viewed in Internet Explorer or any XML browser. But editing of this file should be avoided outside the Simulator. Wrong editing may cause the Simulator to behave incorrectly.