What is a data flow diagram?

A data flow diagram (DFD) is a graphical or visual representation using a standardized set of symbols and notations to describe a business's operations through data movement. They are often elements of a formal methodology such as Structured Systems Analysis and Design Method (SSADM). Superficially, DFDs can resemble flow charts or Unified Modeling Language (UML), but they are not meant to represent details of software logic.

How are data flow diagrams used?

DFDs make it easy to depict the business requirements of applications by representing the sequence of process steps and flow of information using a graphical representation or visual representation rather than a textual description. When used through an entire development process, they first document the results of business analysis. Then, they refine the representation to show how information moves through, and is changed by, application flows. Both automated and manual processes are represented.

What symbols and notations are used in DFDs?

DFD notions and symbols vary according to the methodology model employed. Some organizations have adopted their own conventions, though this is not recommended.

<u>Different DFD notations include:</u>

Gane and Sarson

Yourdon and De Marco

SSADM

UML (commonly used to map software architecture, but can be used in DFDs)

All DFD notions will represent the following:

- *External entities:* information enters from or exits to the system being described
- *Flows:* define the movement of information to, from and within the system being described
- *Stores:* places where information is maintained or held, most often databases or database tables
- *Processes:* transform information