DFD stands for Data Flow Diagram, which is a graphical representation of the flow of data through a system.

A DFD illustrates how data is input into a system, how it is processed and stored, and how it is output from the system.

The DFD is often used to model a system's functional requirements and can be used to help understand the system's behavior and identify areas for improvement.

There are four levels of DFD, which are:

1. Level 0: The context diagram, which shows the system being modeled as a single process or entity, and its relationship to external entities or processes. The context diagram is a high-level view of the system and is used to establish the scope of the DFD.

2. Level 1: The overview diagram, which breaks down the context diagram into its main sub-processes or sub-systems. Each of these sub-processes or sub-systems is represented by a separate process in the DFD.

3. Level 2: The detail diagram, which breaks down the Level 1 processes into their sub-processes or sub-systems. Each of these sub-processes or sub-systems is represented by a separate process in the DFD.

4. Level 3: The functional decomposition diagram, which breaks down the Level 2 processes into more detailed sub-processes or sub-systems. This level of detail is often used when the system is particularly complex or when there is a need to illustrate how data flows through the system in greater detail.

Explain in detail about the DFD and its levels ?