

**Motivation**

- ❖ During systems analysis it is essential for an analyst to decide the necessary and sufficient data for designing an application.  
DFD gives the data flows and stores of a system
- ❖ Individual data elements of data flows and stores can be catalogued
- ❖ Such a catalogue with description of each element and their types will be an invaluable aid while designing a system.
- ❖ A catalogue will also bring out if any data is duplicated/missed
- ❖ A catalogue will also be an invaluable documentation of a system
- ❖ Such a catalogue is called Data dictionary-It is actually metadata, i.e., data about data.
- ❖ After data dictionary is designed one needs to determine how the data is to be input.
- ❖ Data input methods depend on whether the data is filled in by customers in forms manually and later input by data entry operators or data is directly input by users on PC's.
- ❖ We thus need to understand both these methods.
- ❖ Unless data input is correct, results will be unreliable
- ❖ Information systems normally have a large volume of data
- ❖ Because of large volume special controls are needed to ensure correctness of data input - otherwise it is difficult to find which data is incorrect
- ❖ Thus it is important to design appropriate data input methods to prevent errors while entering data

- ❖ Key data elements are important to identify records. They need to be unique, concise and understandable by users. Thus we need to study methods of coding key data element