# Data Flow Diagrams

- Context diagram: clearly defines the scope of the system
  - Shoes exactly which other systems or classes of people transact with the people
  - Shows exactly what data is involved
- Diagram 0:
  - Next level under the context diagram
  - Models the major activated or processes of the system

## Data Flow Diagram Construction

- **Building Blocks**
  - External entity (rectangle)
    - Any class of people, organisation, or even an external system
    - Supply data to and receive data from the system
  - Data flow (arrow)
    - Marks the movement of data through the system
    - Pipeline carrying data through the system
  - Process (bubbles)
    - Indicated points within the system at which incoming data flows are processed and transformed into outgoing data flows
  - Data store (open rectangle)
    - Holding points for collection of data
    - Process can add to or retrieve data from stores
- **Naming**
  - Diagram components should be given brief, clear and meaningful names
  - Names support description of system
  - Names should not be fuzzy
  - Two rules of naming:
    - Data flows and data stores should receive names that describe the composition of data involved
    - Process bubbles should be names using strong, active verbs to stress the transformation taking place in the bubble
- **Tips**
  - DFDs must begin and/or end at a process bubble

    - Show only flow of data, not associated controls
- **Diagram Depth**
    - A process bubble that has either a single input or single output is probably partitioned enough
    - Lowest process bubble diagram should perform a single, well-defined function
- **Diagram Breadth**
    - Diagrams used in user presentations for review should be generally limited to 5-10 processes
    - Diagrams with more than 10 processes are hard to follow