Data Flow Diagrams

What is a Data Flow Diagram?

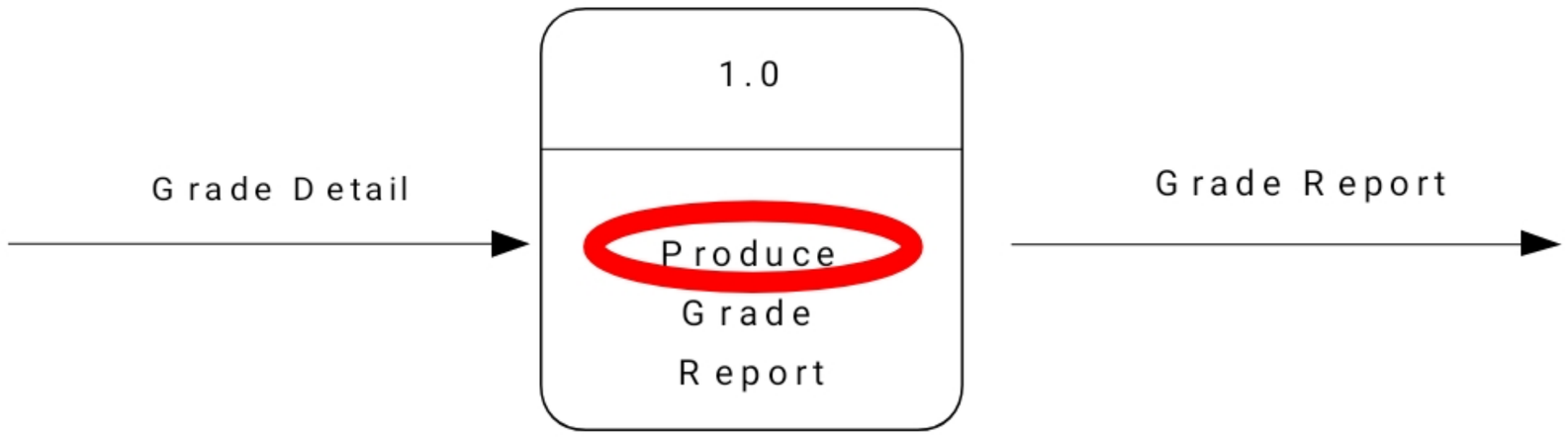
- A data flow diagram (DFD) is a graphical representation of the movement of data between external entities, processes and data stores within a system.

- Simply put, DFD's show how data moves through an information system.

DFD Symbols

Gane and Sarson Symbols	Symbol Name	Yourdon Symbols
	Process	
	Data Flow	
	Data Store	
	External Entity	

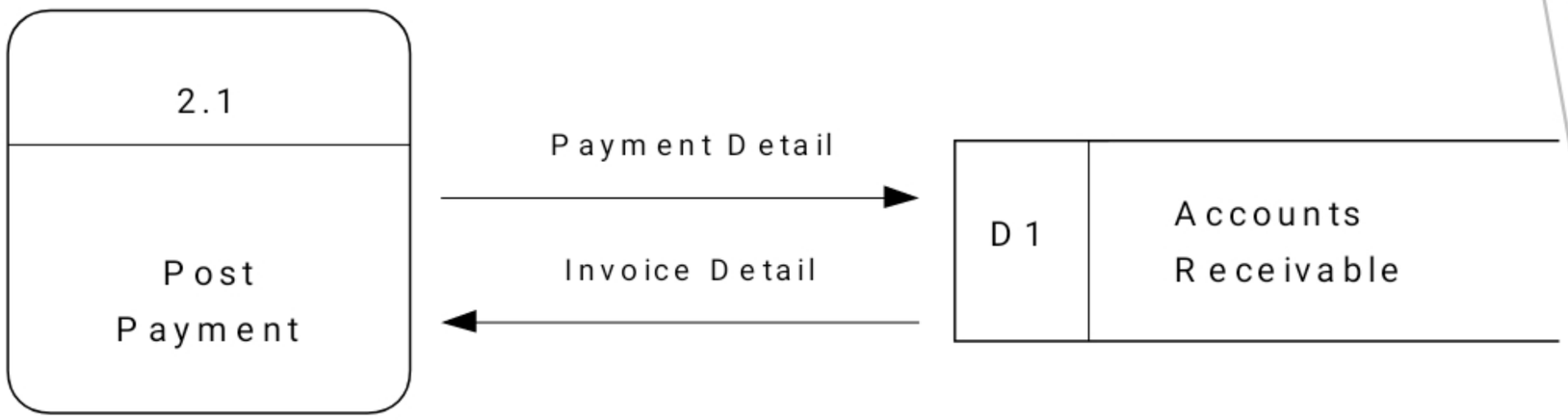
Process



- The work or actions performed on data so that they are transformed, stored, or distributed.

- Process labels should be **verb phrases!**

Data Flow

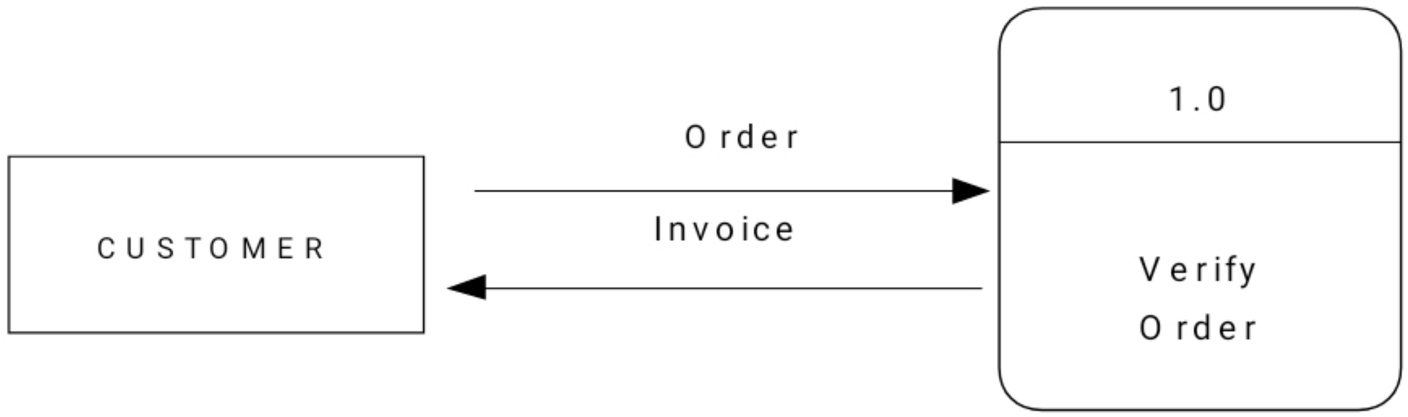


- A path for data to move from one part of the system to another.
- Data in motion!
  - Arrows depict the movement of data.
- **NO VERBS**

Data Store

- Used in a DFD to represent data that the system stores
- Data at rest!
- Labels should be noun phrases
  - **(NO VERBS)**

External Entity aka Source/Sink



- The origin or destination of data!
  - This represents things outside of the system.
- Source – Entity that supplies data to the system.
- Sink – Entity that receives data from the system.
- The labels should be noun phrases!

General DFD Rules

	YES	NO
A process to another process	✓	
A process to an external entity	✓	
A process to a data store	✓	
An external entity to another external entity		✓
An external entity to a data store		✓
A data store to another data store		✓

Advantages of DFDs

- Simple graphical techniques which are easy to understand
- Helps define the boundaries of the system
- Useful for communicating current system knowledge to users
- Explains the logic behind the data flow within the system
- Used as the part of system documentation file
  - Rottman makes you do these in design!

Group Exercise

- Get into your project groups and figure out the best solution for the level 0 DFD for the National Merchandising Case!
- When you are done have one team member come and put your solution on the board.