Guidance for Identifying INFORMATION PROCESSING activities

Identify and list the activities

- Activities are also known as "processes"
- Activities can be one of two types:
  - 1) information processing (IP) or
  - 2) non-information processing (NIP).

- "Information Processing" (IP) activities include those business activities that "transform" (i.e. change) data rather than just "transport" (i.e. move) it.
- These activities may or may not require computers. Information processing activities are represented by either a circle (a.k.a. bubble) symbol when using the Demarco-Yourdon DFD symbol set for data flowing diagramming.
- For example, the following are considered IP (a.k.a. information processing activities):
  1. entering sales figures into a ledger book
  2. creating, copying, completing, or editing documents/forms (e.g. customer orders, vendor purchase orders, payroll time sheets, new employee form, etc)
  3. converting data inflows into different or new outflows
  4. performing checks, reviews, verifications, or classifications,
  5. data entry (i.e. converting data in one format (e.g. paper form) to another format (electronic). e.g. typing, keying, scanning, printing, etc.
  6. formatting, arranging/sorting, calculating, and summarizing data,
  7. retrieving data from disk, storage, filing data, updating data in storage, etc.

- "Non-Information Processing" (NIP) activities come in two variations:
  1. One variation includes operational or physical business activities that don't actually change data. For example, placing items in inventory, picking inventory, packing/unpacking shipments, delivering product, making the product, etc.
  2. The second variation includes those business actions that simply "transport or move" data but do not "transform or change" it. For example, giving, sending, receiving, moving, mailing, emailing, walking a form, passing along data, etc.

- External entities are persons, places, or things that simply send (source) and/or receive (sink) data flows. In other words, external entities do NOT "transform" data, they only "move" it to or from the system under study.
  - External entities are represented by a square symbol in the process modeling technique known as Data Flow Diagramming.
  - A singular noun is used to label each external entity symbol.
  - For example in the Causeway case narrative, Customer is an "external" entity since it doesn't do any cash receipts management processing. A customer only provides a payment and remittance advice to the process (an input for this particular process).
Internal entities are persons, places, or things that perform at least one data processing activity (i.e. they transform data) from the list of activities that are being modeled by the DFD.

Illustrating data flows by listing a noun label for each data flow.

- Data flows represent the "movement" or "transport" of data rather than the "transformation" of data.
- In the process modeling technique known as data flow diagramming (DFD), each data flow is represented by a line with an arrow at one end where the arrow indicates the direction of data movement.
- Each data flow line "must" have a noun label. A data flow label can be either physical or logical.
- Physical data flows have labels that include the type of media used to transport the data whereas
- No "verb" labels are allowed for data flows!!! This reflects the fact that verbs are reserved for activities that change data rather than just moving it. All data movement (i.e. data flows) must be represented with nouns not verbs.