Information!

Is your letter grade in this course data or information?

Is "data" singular or plural?

What successful, large-scale experiment of about 200 years ago was the role model for how information systems work today?
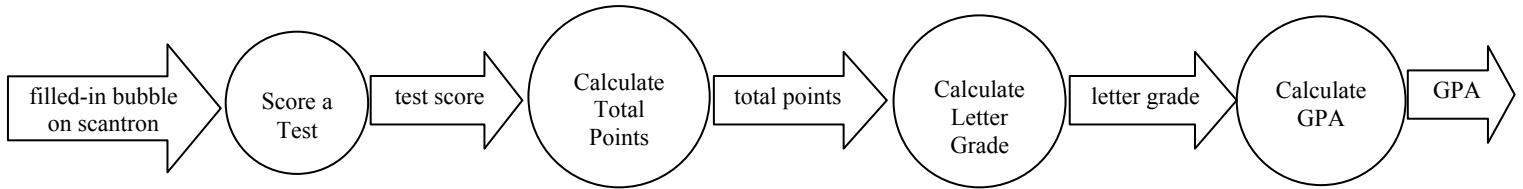

Regardless of stage of refinement, what is the common thread running through all data and information? What **is** data/information?

What are the two levels at which an information system can be conceived and described?

How could you tell what occupations are primarily information producers? What difference does it make?

What are the various forms data/information may take?

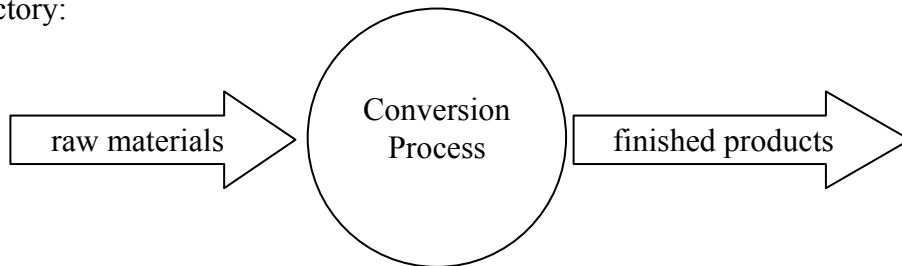## Q1. What is the difference between data and information?

filled-in bubble on scantron → Score a Test → test score → Calculate Total Points → total points → Calculate Letter Grade → letter grade → Calculate GPA → GPA

Information ≡ Processed, value-added data in a chain that is unbounded on one end and bounded on the other end by …
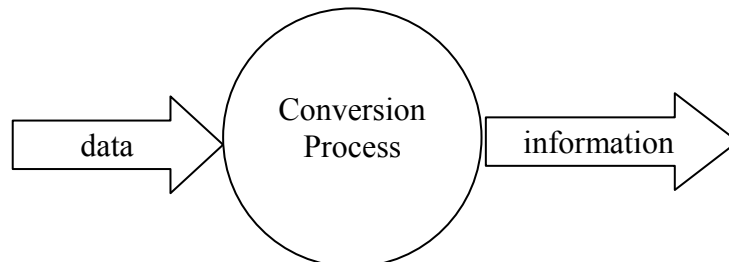
Raw data: The farthest back one can go in the above chain; the point at which the details of an event are born (captured/recorded by the system).

Processed Data as an Analogy

The Industrial Factory:

raw materials → Conversion Process → finished products

The Information Factory:

data → Conversion Process → information

<u>Q2. What is it that makes something (pure) information?</u>

The Acid Test:
It can be digitized (hence reproduced/transmitted) without any loss of value.

A book?
A musical score?
Money?
Leonardo daVinci's *Mona Lisa?*
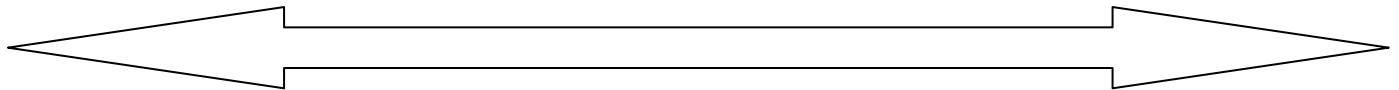A religious sermon?
A doctor's prescription?
A computer program?

<u>Q3. What is the **information** ⬅➡ *physical* continuum?</u>

Choice of focus, source of value:

Pure Content   Physical Medium

The **information** ⬅➡ *physical* continuum:

1. a digital object – pure information
2. a physical object, primarily valued as a carrier of information ("classic information good")
3. a physical object accompanied by some information, but primarily valued for its physical attributes
4. a physical object not accompanied by any information, exclusively valued for its physical attributes
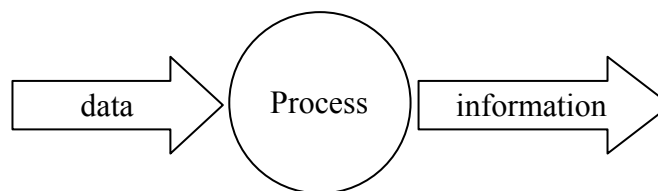
Logical ➔ the WHAT ➔ Content …….. the information (level 1 above)

Physical ➔ the HOW ➔ Medium …….. the technology (level 2 above)

> *I never watch TV* ➔ *True and false!*
> *Have you read the book…?* ➔ *Yes and no!*

data ➔ (Process) ➔ information

The Acid Test:
It can be practiced long-distance … "Tele _____"

Medicine?
Architecture?
Pharmacy?
Music Composition?
Management?

1. **Command**: Behavior-controlling signal (copy, save, print, open, close, ...)
2. **Data**: Relevant details of business events often represented as numbers (*customer 482981 bought 5 units of product XYZ at unit price $6.43 at store 576 on 06/04/2007 at 3:04 pm at cash register 2*) ==> the most popular conception of information as "facts".
3. **Text**: Words subject to the rules of language (grammar, semantics, ...)
4. **Image**: Drawing, photograph, ...
5. **Audio**: Music, voice, sounds, ...
6. **Video**: Animation, movie, ...