

PADM 5501
Speaking Notes
Week 2
August 22, 2022

WHERE WE ARE

- This is our second class meeting.

There is a Discussion Forum 1 assignment (original post) due September 4.

Discussion Forum 1

Identify a type of organization that you are familiar with, preferable in the public sector. Identify one common business process in such an organization. (For example, a medical clinic has a business process of verifying the insurance status of a prospective patient. For another example, a university HR department has a business process of running a background check on prospective employees.) Having identified the type of organization and a common business process in such an organization, identify the event or condition that causes the business process to begin. Then trace (write out) what happens next in the process of the business process. Then what next, and so forth. Identify any conditional branching in the process. (For example, if the amount of the withdrawal is over \$1,000 get a supervisor's approval.) Then, what is the product (result) of the business process having run? Is the result a decision? Is the result an action? Explain the nature of the product of the business process having run. (For example, if the prospect patient does not have insurance coverage, the patient is denied medical services except in a life-threatening situation.)

Rubric (original post):

- Clear identification of a type of organization.
- Clear identification of a common business process in that type of organization.
- Explanation of what event or condition triggers the beginning of that business process.
- Step-by-step explanation of the business process including conditional branches.
- What the running of the business process achieves (an outcome or result).
- Clearly written.
- Logically developed.

Rubric (reply to another student's original post):

Specific identification of something of interest in the other student's original post.
SUBSTANTIAL/MEANINGFUL commentary about that point or an extension of that point.

ACTIVITY	PERCENT	POINTS	DUE DATE
Discussion forum 1	10%	100	Sunday Sept. 4
Opportunity to resubmit Discussion forum 1			Sunday Sept. 11
Discussion forum 1 Follow up	10%	100	Sunday Sept. 18
Midterm Exam	20%	200	Sunday October 2
Discussion forum 2	10%	100	Sunday October 23
Discussion forum 2 Follow up	10%	100	Sunday October 30
Activity	10%	100	Sunday Nov. 6
Opportunity to resubmit Activity			Sunday Nov. 13
Portfolio Assignment	10%	100	Sunday Nov. 20
Final Exam	20%	200	Sunday Dec. 4

		Week begins . . .	Week ends . . .	Assignment due . . .
Week 1		Monday August 15	Sunday August 21	
Week 2		Monday August 22	Sunday August 28	
Week 3	Discussion 1	Monday August 29	Sunday Sept. 4	Sunday Sept. 4
Week 4	Opportunity to redo and resubmit Discussion 1	Monday Sept. 5	Sunday Sept. 11	Sunday Sept. 11
Week 5	Discussion 1 follow up	Monday Sept. 12	Sunday Sept. 18	Sunday Sept. 18
Week 6		Monday Sept. 19	Sunday Sept. 25	
Week 7	MIDTERM	Monday Sept. 26	Sunday October 2	Sunday October 2
Week 8		Monday October 3 Midterm report to be reported to Registrar's Office on Oct. 6	Sunday October 9	

Week 9	FALL BREAK	Monday October 10 Last day to withdraw without academic penalty Oct. 14	Sunday October 16	
Week 10	Discussion 2	Monday October 17	Sunday October 23	Sunday October 23
Week 11	Discussion 2 follow up	Monday October 24	Sunday October 30	Sunday October 30
Week 12	ACTIVITY	Monday October 31	Sunday Nov. 6	Sunday Nov. 6
Week 13	Opportunity to redo and resubmit ACTIVITY	Monday Nov. 7	Sunday Nov. 13	Sunday Nov. 13
Week 14	ePortfolio assignment	Monday Nov. 14	Sunday Nov. 20	Sunday Nov. 20
Week 15	THANKSGIVING WEEK	Monday Nov. 21	Sunday Nov. 27	
Week 16	FINAL EXAMS	Monday, Nov. 28	Last day of classes, Dec. 1	Sunday Dec. 4
Week 17	Final grades submitted to Registrar's Office Monday, Dec. 12	Monday, Dec. 5		

QUICK REVIEW

As I use the term, “convergent engineering” of organizations regards the designing of human organizations and their information systems together as a whole. Most modern organizations (especially in the public sector) primarily process information. Most people (not all) aspire to be or become knowledge workers. Computers are extensions of our MINDS and brains.

There is an important distinction between ERPs and stovepipe applications. A stove pipe application supports one “business process” of an organization. It stands alone. It is not connected to AN ENTERPRISE DATABASE. In contrast, an ERP (system) is a collection of modules that are designed to work together (for a particular kind of organization) and to share an enterprise database.

NEW MATERIAL

HARDWARE

"Computers" originally referred to employees who did mathematical calculations by hand for NASA and other organizations.

The first class of electronic computers were huge machines that ran on vacuum tubes and were as large as an entire room. They were expensive and needed frequent repairs. Job processing was batch, usually of paper cards. A large corporation had just one of them. They were based on centralized processing. They did not "talk to" one another.

Historically, the next class of electronic computers were called mini computers. They were/are about the size of a refrigerator. They were like mainframes, except smaller.

In the early 1980s several companies invented "personal computers." They were/are about the size of a large suitcase. The major difference is that they can be connected together into networks -- either peer-to-peer networks or client-server networks. They don't individually have the power of a mainframe or mini, but the fact that they can "talk to" one another is huge, especially for the needs of organizations.

Then came laptop computers, tablets, smartphones and so forth. Most of these devices are wireless.

Satellites are not being placed in orbit around the earth and in time almost every location on earth will have a pretty good wireless connection to the Internet and the World Wide Web .

Over time, hardware has become smaller and "Moore's law" continues to happen.

https://en.wikipedia.org/wiki/Moore%27s_law

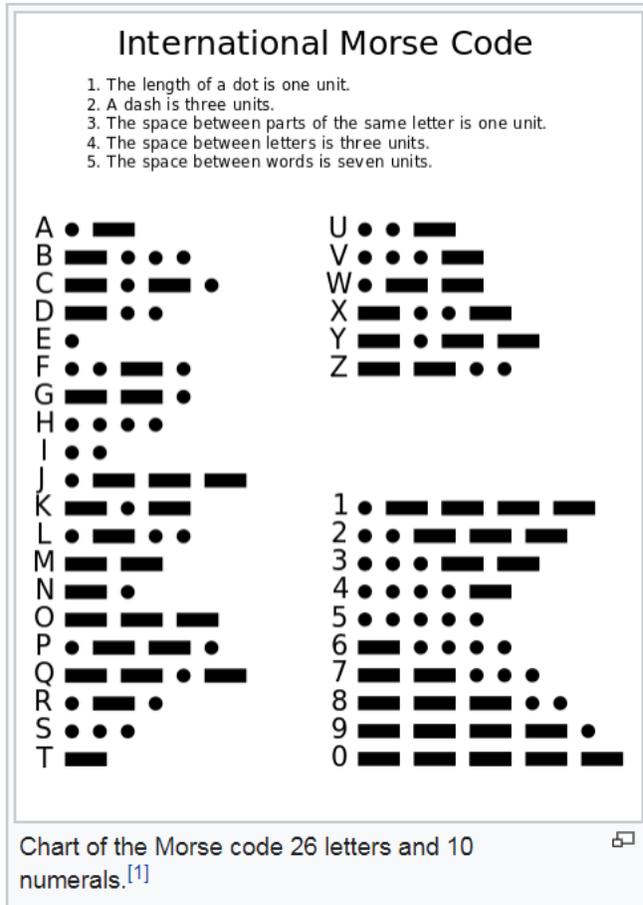
Research is being done now into quantum computing. If that can be made to work, it is a whole new ballgame, for better or for worse.

SOFTWARE

Early computers were calculators and the software was mathematical.

It is something about binary code and "base 2" in contrast to "base 10" we have been taught.

Binary communications is like Morse code. Communication is possible based only on two symbols, like 0 and 1; or the dots and dashes of Morse code.



Source: https://en.wikipedia.org/wiki/Morse_code

People studying information theory discovered that sounds and images can also be communicated in binary. Colors can be sent in binary. Not so much odors, yet.

There is a difference between analog and digital. Analog signals are "wavy." Digital signals are discrete and binary.

Software is the instructions that can run on appropriate computer hardware. Without software computer hardware might as well be a boat anchor. People who develop software are called computer programmers.

Early programs were written in procedural programming languages, like Fortran and COBOL.

Modern programs are written in object-oriented languages, like JAVA and C++.

Early programmers wrote code line by line.

Modern programmers use visual tools like Visual Studio Code and can work at a higher level of abstraction.

https://en.wikipedia.org/wiki/Visual_Studio_Code

It takes a very good mind to be a programmer.

It takes a good mind to understand the needs of modern organizations.

Systems Analysts are professionals who specialize in help bridge the gap between understanding the needs of organization and communicating with programmers.

Usability regards the question of whether "end users" like and can understand the application programs (like D2L) they need to use to do their jobs. End users are sometimes referred to as knowledge workers.

An OPERATING SYSTEM is a special kind of software that "sits between" computer hardware and application software. The combination of a kind of hardware and an appropriate operating system is called a PLATFORM. DOS was the operating system for PC hardware long ago.

NETWORKING software is also specialized software written to manage electronic communications among computers in a network. The Internet is the ultimate network of networks. The World Wide Web is what makes visual interfaces available on the Internet.

https://en.wikipedia.org/wiki/World_Wide_Web

RELATIONSHIP BETWEEN HARDWARE AND SOFTWARE

Hardware, software and kinds of programming tools have evolved together through the years.

Sometimes you need to get new hardware to run new software applications. Sometimes old hardware can be modified to run new applications. The parts of your network need to talk to each other. "Plug-and-play" is possible because of STANDARDS.