PADM 5501
Parts of Chapters 6, 8 and 9
Information Security
Business Processes
The People in Information Systems
Week 9, Chapter 9
Dr. Neubauer

https://resources.saylor.org/wwwresources/archived/site/textbooks/Information%20Systems%20for%20Business%20and%20Beyond.pdf

OR

https://www.textbookequity.org/bourgeois-information-systems/

WHERE WE ARE

		Week begins . . .	Week ends . . .	Assignment due . . .
Week 9	FALL BREAK	Monday October 10 Last day to withdraw without academic penalty Oct. 14	Sunday October 16	
Week 10	Discussion 3A	Monday October 17	Sunday October 23	
Week 11	Discussion 4A follow up	Monday October 24	Sunday October 30	Sunday October 30
Week 12	ACTIVITY	Monday October 31	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		Monday, Dec. 5		
	Final grades submitted to Registrar's Office Monday, Dec. 12			

- I sense that the rest of the semester may move by relatively quickly.
- The next three week will be about customized information system development in organizations. I like this subject and look forward to teaching it again.

SOME THOUGHTS ABOUT INFORMATION DESIGN AND BUSINESS PROCESS DESIGN.:

E-commerce is working pretty well now, especially for Amazon.com. The key is an intuitive web portal in spite of the fact that there are so many USE CASES and the menu systems have to be relatively complex.

E-government is not on par yet with the best of e-commerce. Sites need to be designed from the USER'S PERSPECTIVE and not from the organization's perspective. We will get into this in the following weeks.

Designing a web site is really an exercise in INFORMATION DESIGN. It is really important because it is many people's first impression of a place. It can affect ECONOMIC DEVELOPMENT and the costs of doing things for citizens and others.

https://www.cityofwayne.org/

Wayne
City in Nebraska

To be a very small place, the city of Wayne is surprising complex. In my opinion, its web portal organizes that complexity quite well. To me, this is evidence of effective administration. Yes, it involves a contract with a professional company that designs, builds and maintains web sites. But it is a reflection upon the city itself and its administrators.

https://www.cityofwayne.org/

The early websites were primary ways to organize and present information. The major design challenge was INFORMATION ARCHITECTURE. The challenge was to create HIERARCHIAL MENU SYSTEMS by which people could navigate to and find information. NOW the challenge is to make it possible for citizens and others to INITIATE BUSINESS PROCESSES online. The INTERFACE is called the FRONT END and involves web pages programming. The BACK END involves the internal computer systems (and sometimes human "systems") needed to support the business process – either in real time or asynchronously.

Ideally, these systems are designed for the CONVENIENCE and from the perspective of the USERS.

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

Poor design of the technology can make users anxious, frustrated and worse. It can be a major cause of STRESS.

CHAPTER 9 -- THE PEOPLE (ROLES) IN INFORMATION SYSTEMS ADMINISTRATION AND MANAGEMENT

OKAY, so the information technology revolution has created many employment roles and employs many IT professionals. Let me share a few thoughts.

Whereas general administrators tend to be extroverts, IT professionals are often shy people and may be socially awkward. We/they are smart, but may lack some of the neurology for social needs. They/we may be on the autism spectrum. They/we may be very literal in understanding things and may have difficulty processing emotions and understanding the feelings and intentions of others. TO MOVE FROM A TECHNICAL POSITION into an administrative position may difficult for these reasons.

There is sometimes a lack of mutual respect between IT professionals and other employees -- sometimes called "end users." That lack of respect can become the seedbeds of conflict within organizations.

Poorly designed systems can really, really cause end users to become aggravated. Systems should go through USEABILITY TESTING. End users should be involved in system design. A programmer who makes his/her life a little easier for a moment by not including two simple lines of code may cause THOUSANDS of end users to make additional keystrokes for decades.

Modern software applications are very, very complex. They behave EXACTLY AS THE CODE IS WRITTEN. To the degree possible, they should be written to accommodate the way end users think and how end users understand their jobs. The process of finding "bugs" in new code is likely to take years.

So we have PROGRAMMERS and we have END USERS.

We have SYSTEMS ANALYSTS who try to understand the needs of the organization (and the end users) and "translate" between the PROGRAMMERS (and other IT professionals) and others.

In many modern organizations there is a CIO -- chief information officer. This is like the position of CEO (Chief Executive Officer) but not quite a high. A CIO can be a vice president, in parallel with a CFO (Chief Financial Officer) and other vice president-level positions.

A CIO must understand technology (and talk shop with programmers and others) and must also work in the company of high-level general administrators. A CIO must be able to see things from the perspective of the administrators and even participate in "visioning" and anticipating the future. You cannot vision the future of the organization without an understanding of the OPPORTUNITIES new and emerging technologies are likely to create.

IT TRAINERS (and help desk employees) help end users learn new and "upgraded" systems. In my opinion, good software does not require a lot of trainings because it was written to be INTUITIVE to the end users. Help desk personnel need the "people skills" to not tell end users they are dummies. They are kind of like BUSINESS ANALYSTS in that they "walk in two world."

There are lots of kinds of COMPUTER PROGRAMMERS. They kind of live in a parallel universe. Beyond a point in custom software development, others need to leave the room and let the programmers do what programmers do. It used to be that many applications were written by one person. Now programmers have to work in TEAMS because the applications are so large. In a way, what they do is magic. But hopefully, the "magic" is well documented, so "bugs" can be fixed and features can be added, without risking "breaking" the whole thing.

Programmers create SOURCE CODE which gets COPILED into EXECUTABLE CODE. You cannot modify executable code. Programmers can only modify their source code, which can then be compiled again into a (modified) executable code. If the source code for an application is lost, then you are sunk and it is "back to the drawing boards." It is VERY IMPORTANT that the programmers DOCUMENT the source code they write. It is very important to keep backup copies of source code.

It used to be that many large-scale programming projects failed (or came in late or way over budget). We have learned to manage programming projects better. There are ways to MITIGATE the risks. This is the responsibility of PROJECT MANAGERS.

There are FRONT END SPECIALISTS and BACK END SPECIALISTS. The "front end" of a system is what the human user sees. The "backend" is often an older application

that does the work necessary to "talk to" and support the front end. An old application written in COBOL can be "wrapped" to "look like" a modern application to a modern front end. It is kind of like an old hospital building that has parts built over decades, with "middleware" used to adapt the parts to fit together into one another.

As ARTIFICAL INTELLIGENCE (AI) advances, source code will increasingly be written by computer programs. AI is often based on ARTIFICIAL NEURAL NETWORKS, intended to be somewhat like the NATURAL NEURAL NETWORKS IN OUR BRAINS. Ideally, an AI application should be able to explain how it did a calculation and WHY it is making its decision. Beyond a point, that may not be possible.

We are already beyond the point that ANY HUMAN fully understands COMPLEX SYSTEMS OF SOFTWARE APPLICATIONS upon which we absolutely depend. These systems may have UNEXPECTED EMERGENT BEHAVORS as they interact with one another. It used to be humans could always "pull the plug" if needed. But the consequences of pulling the plug may be too great to do so. As stock markets have become automated many traders are now 'bots. If the whole thing goes haywire, how do you back out of it? How can humans recover billions or trillions of dollars that may have simply vanished?

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I don't usually think of a SOCIAL MEDIA SPECIALIST as an IT specialist, but perhaps I should. She or he probably needs some understandings of the technologies that support various kinds of media.

And then there may be HUMAN FACTORS SPECIALISTS who are into ergonomics and so forth.

A POWER USER is an end user who has some advanced technical skills. They may help other end users but I think their gifts should be used carefully. They may be just brilliant enough to write "bad" macros in Excel, for example. Beware the work-around. Sooner or later, it will become a problem, and the person who discovered it is likely to be long gone.

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Are computers themselves "players" in IT systems?

I do not believe that computers are self-aware sentient beings. I doubt that they ever will be. But I think they will continue to become important "players" in modern organizations. It is not so much about what they are as it is about how we regard them.