I. Introduction

Types of Software
Information Systems
Information Systems Technologies and Methodologies

Software Everywhere!

- Generations of Software
  - ✓Software for the techies (…-1990)
  - ✓Software for the professionals (1990 - 2005)
  - ✓Software for the masses… (2005 - …)
- Types of Software
  - ✓System software (OS, network software,…)
  - ✓Middleware (compilers, DBMSs,…)
  - ✓Application software (embedded software, ***information systems***,…)

Information Systems

- Used heavily in large organizations
- Give feedback on on-going projects (e.g., production)
- Used for decision support (DSS)
- Used for on-line analytical processing (OLAP)
- Used for data mining
- Used for customer service (web-based systems)

Information System Technologies

- Database Management Systems (DBMS)
- Data Warehouses
- Data Mining
- Web technologies (Java, HTML/XML,RDF/S, Web services,…)

Information System Methodologies

- Where do we start? --> Feasibility study (or, early requirements analysis)
- Define the problem --> Requirements analysis
- Design a solution --> Design

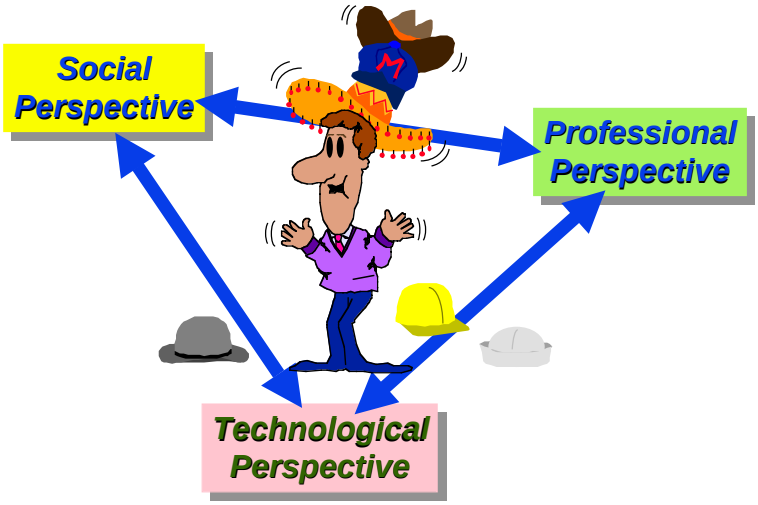
This course is about methodologies for building information systems!

Why is this Course Important?

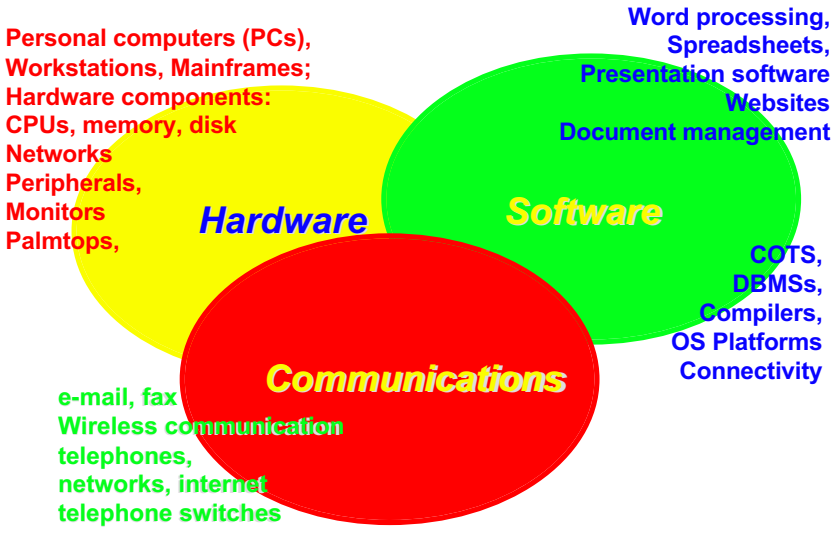
- Most errors (54%) are detected after coding and testing.
- Almost half of all errors (45%) are introduced during requirements and design.
- Most errors made during requirements analysis are non-clerical (77%).
- Requirements errors can cost up to 100 times more to fix than implementation errors -- if they are not caught early on.

Need to do requirements and design right!

Background of a Systems Analyst



Technologies for System Analysis



Readings

1. Lecture units 1.1 - 1.4 (available at the course website.)