Chapter 12

- **Six-phase problem-solving procedure**
  - 1. Preliminary Investigation
  - 2. Syetems Analysis
  - 3. System Design
  - 4. System Development
  - 5. System Implementation
  - 6. System maintenance
- **Phase 1: Preliminary Investigation**
  - The preliminary investigation determines the need for a new information system
  - Defining the problem
  - Suggesting alternative system
  - Preparing a short report
- **Phase 2: System Analysis**
  - Gathering data
    - Data is collected about the present system and then analyzed to determine the new requirements
  - Analyzing the data
    - Checklists
    - Top-down analysis method
    - Grid charts
    - Decision tables
    - System flowcharts
    - Data flow diagrams
    - Automated design tools
      - Computer-aided software engineering tools (CASE)
- **Phase 4:System Development**
  - In the development phase, you acquire the software and hardware, and test the new system
- **Phase 3: System Design**
  - Define the alternatives, select the best system, and write a systems design report
  - evaluate according to economic feasibility, technical feasibility, and operational feasibility.
- **Phase 6:System maintenance**
  - Ongoing activity that includes
    - System audit
    - Periodic evaluation
- **Phase 5: System Implementation**
  - known as conversion and convert old onw to new system.
  - Type of system conversion
    - Direct
    - Parallel
    - Pilot
    - Phased
- **Prototype and rapid application Development**
  - Alternatives to the systems life cycle may be used if the system is not feasible
- **Careers in IT**
  - System analyst
    - Plans and designs new systems, following the systems life cycle