

Florida Polytechnic University

CEN 3820 Systems Analysis and Design, Fall 2025

Assignment # 1 (20 points)

Due Date: Friday Sep. 12, 2025 at 11:59pm.

Instructions:

- This is an individual assignment. Group work or copying is not permitted
 - Answer all questions
 - Put your name on the solution
 - Upload your solution to Canvas before the due date
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1. What are the seven types of information systems used in business? (7pts)
 - a Enterprise Computing: Integrate a company's primary function, like sales or services, to improve efficiency, reduce costs, and help managers make key decisions. Improves data security and reliability by imposing a company-wide framework for data access and storage.
 - b Transaction processing (TP) systems: Process data generated by day-to-day business operations, such as customer order processing, accounts receivable, and warranty claim processing. It ensures that if any single element of a transaction fails, the system does not process the rest of the transaction.
 - c Business Support Systems: Provide job-related information support to users at all levels of a company. It analyzes transactional data and generates information needed to manage and control business processes and make better decisions.
 - d Knowledge Management systems: Use a large database as a knowledge base to identify data patterns and relationships, which allows users to find information by entering keywords.
 - e User Productivity systems: Technology that improves productivity, like email, video, and web conferencing, spreadsheets, and data sharing applications.
 - f Digital assistants: Combinations of knowledge management systems and user productivity systems enhanced by artificial intelligence and machine learning.
 - g Systems integration: A Combination of transaction processing, business support, knowledge management, and user productivity features.

2. Summarize the seven main functions of the IT department. (7pts)
- a Application development: Systems are developed by teams consisting of users, managers, and IT staff members.
 - b System support and security: Provides vital protection and maintenance services for system hardware and software, including enterprise computing systems, networks, transaction processing systems, and corporate IT infrastructure.
 - c User support: Provides users with technical information, training, and productivity support, usually called a help desk.
 - d Database administration: Involves data design, management, security, backup, and access.
 - e Network administration: Includes hardware and software maintenance, support, and security. Controls user access, network administrators install, configure, manage, monitor, and maintain network applications.
 - f Web support: Specialists design and construct web pages, monitor traffic, manage hardware and software, and link web-based applications to the company's information systems.
 - g Quality assurance: QA team reviews and tests all applications and systems changes to verify specifications and software quality standards.

3. Explain the two main factors affecting systems requests. (3pts)

- External Factors:
 - Technology: Changing technology affecting business and society
 - Suppliers: Relationships with suppliers
 - Customers: Customer requests and experience improvements
 - Competition: New product research and development, marketing, sales, and services
 - Economy: Economic activity affects system scale and growth
 - Government: New regulations directly affect the design of information systems.
- Internal Factors:
 - Strategic plan: Company goals and objectives that need IT support
 - Top managers: Top management usually initiates large-scale projects
 - User Requests: Users want system support
 - IT department: IT staff make recommendations and proposals
 - Existing Systems and Data: Errors in systems trigger requests
 - Company Finances: The Company's financial status can affect systems projects

4. What is a SWOT analysis and why it is important? (3pts)

- SWOT stands for strengths, weaknesses, opportunities, and threats. A SWOT analysis can focus on a specific product or project, an operating division, the entire company, or the mission statement itself. It examines a firm's technical, human, and financial resources to assess the SWOT situation of the firm, which helps to plan the firm's future decisions while avoiding

goals that are unrealistic, unprofitable, or unachievable. It is an important step for a company to set forth goals that are achievable and consistent with real-world conditions.