Unit 1:The context of System Analysis and Design Methods

Topics to be Covered

- What is system?
- Information System
- Types of Information System
- System Analyst Roles Responsibilities and Players in System Game
- Business Driver’s of Today’s Information System
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- System Development Process
- Questions and Other Discussion

System and Information System

- **A System** is a set of components that interact with one another and serve for a common purpose or goal. It focus on software System.
- Information system is an arrangement of people, data, processes, information presentation, and information technology that interact to support and improve the day to day operation of an business organization as well as support the problem solving and decision making activities and managing activities.

Some Example

- Payroll Management system for Organization
- College Management System
- Hospital Management system
- Office automation system
- Etcs.

Types of Information System

- Transaction Processing System(TPS)
- Management Information System(MIS)
- Decision support system(DSS)
- Executive Information System(EIS)
- Expert System(ES)

Transaction Processing System

- The information system that capture and record the information about specific transaction of an organization.
- It is operated by operation level employees.
- For Example: Software for Fee collection, Software for payments

Management Information System

- The information system that take information captured by TPS and produce reports that management needs for planning and controlling the business.
- For Example: College Management System, Hospital Management System

Decision support system

- a set of related computer programs and the data required to assist with analysis and decision-making within an organization.
- allow a user to explore the impact of available options or decisions.
- It has three parts: *Composed data, Mathematical model and user interface*

Executive Information System

- The software which provide information for executives to use in strategic planning.
- It is used by top level management for strategic planning of the organizations.
- The data is collected from News of competitors, stock markets and economic forecast.

The players of System: Stakeholder

- The person who are involved to develop the system directly or indirectly are called system stakeholders.
- stakeholder is any person who has an interest in an existing or proposed information system.
- They may be internal or external system user

Stakeholder: System Owner

- The person who invest for the system.
- They set priorities and determine the policy of the system.
- They analyze system in terms of cost and benefit.
- They see the picture of the system

Stakeholder: System User

- The person who use and affected by the system on a regular basis.
- Internal users are the users who involved to develop the system. Ex: Clerical, supervisors
- The users who are involved externally in the system. Ex: Customers, Suppliers.

Stakeholder: System Designer

- The person who translate business requirement into technical Solution.
- They view the system in terms of design as blueprints.
- Example: Web architect, Database Architect and web Architect.

Stakeholder: System Builder

- They construct information system components based on design specification.
- A person who constructs information system components on the basis of design.
- For Ex: application programmer, System programmer and database programmer etc.

Stakeholder: System Analyst

- System analyst is a person who manages all the activities of system development. specialist who studies the problems needs and various opportunities of system development.
- SA involves from analysis to implementation of the system.

Skills needed by System Analyst

- Working knowledge of Information Technology
- Computer Programming Expertise and Experience.
- General knowledge of Business process and Terminology.
- Problem solving skills
- Good interpersonal communication skills
- Flexibility and Adaptability
- Character and Ethics

Roles of System Analyst

- Analyzing Business problems and opportunities.
- Managing technical and non technical human resource.
- Managing all departments
- Working as problem solver
- Taking feedback from end users

Business Drivers of Today's IS

- Globalization of the economy
- Electronic Commerce and Electronic Business
- Security and Privacy
- Collaboration and Partnership
- Knowledge asset Management
- Continuous asset Management
- Continuous process improvement and Total quality Management
- Business Process Design

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Globalization of the Economy

- Nowadays local market is expanding in International.
- At the time of developing any system it must support :
  - More than one language
  - It must support any currency
  - It must support the rule of international trade
  - IT must support other cultural activities.

Electronic E-Commerce and E-Business

- The internet is fundamentally changing the rules of business.
- E- Commerce feature must be added to the information system.
- E-Business is the use of internet to conduct and support day-to-day business activities.

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Technology Driver's of Today's IS

- Network and Internet
- Mobile and Wireless Technology
- Object Oriented Technology
- Collaborative Technology
- Enterprise Application

Simple System Development Approach

- System Initiation
- System Analysis
- System Design
- System Implementation and Maintenance
- Enterprise Application

Questions and Discussion