

Unit 1

Introduction to Information Technology

Lecture 1

What is IT?

- Information technology is a contemporary term that describes the combination of computer technology (hardware and software) with telecommunication technologies (data, image and voice networks).
- IT is defined as the capabilities offered to organizations by computers, software applications, and telecommunications to deliver data, information and knowledge to individuals and processes.
- The computer and communication systems consists of various types of appropriate hardware devices and software that are used for information management.

The system design for information management consists of following functions:

1. Data Acquisition Devices
2. Data Processing devices
3. Output Devices
4. Storage devices
5. Communication Devices

Characteristics of Information

- Accuracy
- Timeliness
- Relevance
- Complete

Importance of IT

IT has tremendously paved the way of business organizations towards innovation and growth. Importance is highlighted as:

1. Office Automation

- Using computer and communication technology for managing organizational information.
- Includes the use of computer, telephone, email and machines.

2. Communication

- IT has made it easier for the organizations to communicate with the customers, suppliers and employees.

3.Business Analysis

- Aimed at providing solutions to various complex business problems.

4. Human Resource Management

- The firms can rely on IT tools as far as the function of HRM is concerned.
- Beginning from the recruitment to employee exit.

5. Marketing

- Marketing department is the face of the company.
- Deals with creating, communicating and delivering value to the customers.
- IT has provided wings to the Marketing.
- Companies can reach to the customers through using tools like digital marketing and Customer relationship management.

6. Finance and Accounting:

- IT is used in finance and accounting functions of the firms.
- All the financial information like daily entries of the sales, purchase etc. can be handle in various financial software.

Digital Economy

- An IT driven economy is known as digital economy because organization today are exploiting more and more of computing and communication technologies for achieving better competitiveness.
 - Organizations are switching towards the use of digital contents (forms, letters etc)
 - Organizations using modern communication technologies (email, SMS, video conferencing etc)
 - Organizations making use of internet.
 - Organizations making online ticket booking, payment through credit cards, electronic currencies etc.
 - Education industries creating e-books, e-journals, e-newspapers etc.
 - Health care industry offering better health care service through digital operations.

Key Attributes of Digital Economy:

- It is Digitized
- It is connected
- It is Shared
- It is Personalized
- It is Direct

New Business Models in Digital Economy

A business model refers to a method of doing business for revenue generation. Doing business involves :

- Describing a product or service that the business offers
- Describing the process of making , packaging ,costing etc of the product or service
- Describing the target customers for the product or service.
- Describing ways to deliver the product or service to the customers.
- Describing ways to disburse and collect revenue from the parties involved.

Components of Digital Economy:

1. e-business
2. e-business infrastructure
3. e-commerce

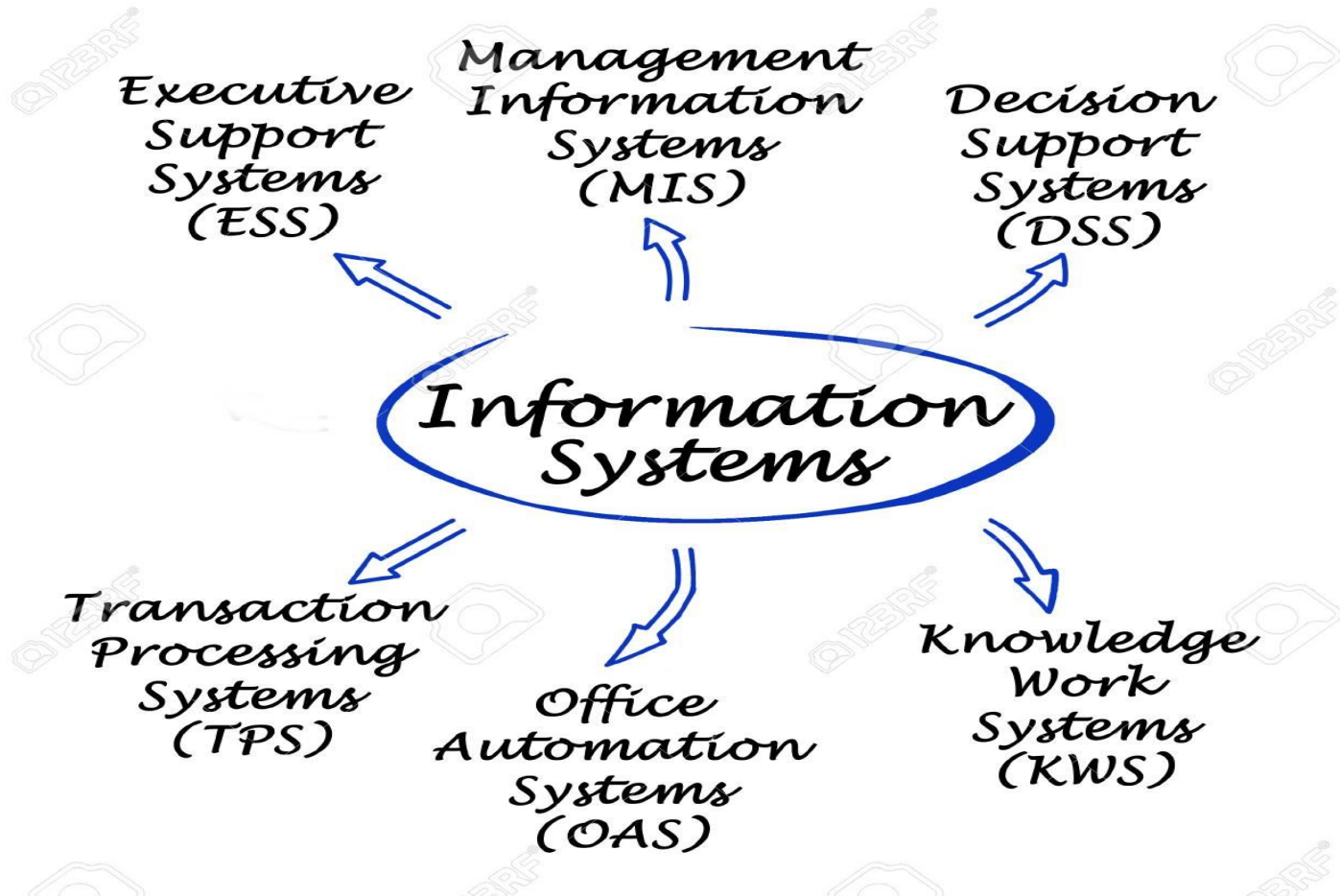
Information system(IS)

- IS is an integrated set of components for collecting, storing, and processing data and for providing information, knowledge, and digital products.
- Business firms and other organizations rely on information systems to carry out and manage their operations, interact with their customers and suppliers, and compete in the marketplace.

Elements of Information System:

- Computer hardware: This is the physical technology that works with information.
- Computer software: The hardware needs to know what to do, and that is the role of software.
- Telecommunications
- Databases and data warehouses.
- Human resources and procedures.

Architecture of Information System



Types of information System

- 1.Transaction Processing Systems (Line Workers)
- 2.Management Information Systems (Middle managers)
- 3.Decision Support Systems (Senior Mangers)
4. Executive Support System (Executives)

Role of Information System In Business Today

- Operational Excellence
- New product, Services, and Business Model
- Customer and Supplier Intimacy
- Improved Decision Making
- Competitive Advantage
- Survival

Role of IT in Organization:

- Information technology (IT) has become a vital and integral part of every business plan. From multi-national corporations who maintain mainframe systems and databases to small businesses that own a single computer, IT plays a role.
- The reasons for the present use of computer technology in business can best be determined by looking at how it is being used across the business world.

- Communication Between Employees ,Suppliers and Customers
- Inventory Management Systems
- Data Management Systems
- Management Information Systems
- Customer Relationship Management

Communication Between Employees, Suppliers and Customers

- For many companies, email is the principal means of communication between employees, suppliers and customers.
- Email was one of the early drivers of the Internet, providing a simple and inexpensive means to communicate.
- Over the years, a number of other communications tools have also evolved, allowing staff to communicate using live chat systems, online meeting tools and video-conferencing systems.
- Voice over internet protocol (VOIP) telephones and smart-phones offer even more high-tech ways for employees to communicate.

Managing information Technology in Organization

- Project Leader:
Make sure to have an expert on your staff
- Set Goals:
The goal of an organization need to be integrated with an IT.
- Read the manuals
Need to be familiar with the manual provided by an expert.
- Test
- Calibrate to your specifications
- Summarize the manuals
- Train Employees to operate the equipment
- Learn from the success/failure of others

Steps to manage Technology Change

- Take the opportunity to review business process first
- Keep end users in the loop
- Test and validate the system thoroughly
- Role the solution out incrementally if needed.

End of Unit 1

Assignment 1 *(Submission Deadline Jan 2,2023)*

1. Is Khalti an e-commerce application ? Justify
2. Explain the role of IT in Human resource recruitment.
3. What are the things to be considered while managing IT in an organization ?
4. Do you think that IT is a must in an organization? Explain with examples.
5. Explain the components of an Information system.