



Republic of the Philippines  
Department of Education  
REGION III  
SCHOOLS DIVISION OFFICE OF NUEVA ECija

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**LEARNING ACTIVITY SHEET  
SPECIAL PROGRAM IN ICT 10  
INFORMATION SYSTEM AND RESEARCH 10  
*Third Quarter, Week 1***

Name of Learner:

\_\_\_\_\_ Date: \_\_\_\_\_

Grade Level /Section: \_\_\_\_\_

**APPROACHES TO SYSTEMS DEVELOPMENT**

**BACKGROUND INFORMATION FOR  
LEARners**

System is possibly the most overused word in our vocabulary. The common feature, which all systems share us that they are collection of elements integrated to achieve the required goals. A system exists because it is designed to achieve one or more objectives. A system may be regarded as a set of entities or elements interacting among themselves in a certain pre-specified manner to process inputs and produce outputs (objectives) in a definite time period. The concept of a system is shown below:

Screenshot of a web browser showing a course page from ecoursesonline.iasri.res.in. The title is "IT IN DAIRY INDUSTRY". The navigation menu includes "Home", "Site pages", "Current course", "CS-1" (selected), "Participants", "General", "Topic 1", "Topic 2", "Topic 3", "Lesson 5: SYSTEMS DEVELOPMENT APPROACHES" (selected), "Quiz 5", "Lesson 6: SYSTEMS ANALYSIS AND DESIGN", "Quiz 6", "Lesson 7: PROJECT MANAGEMENT TOOLS", "Quiz 7", "Topic 4", and "Topic 5". The main content area is titled "Lesson 5. SYSTEMS DEVELOPMENT APPROACHES". It discusses interdependent components and shows a diagram of a system with input, process, and output. The diagram is labeled "Fig. 5.1 System with input and output".

Fig. 5.1 System with input and output

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In general an information system accepts input data and processes it to produce information as output for decision making. System is evaluated on the produced output and feedbacks are given to improve the system.

## Types of System

Systems have been classified in different ways. Common classifications are:

- I. Physical and Abstract System
- II. Deterministic and Probabilistic System
- III. Open and Closed System
- IV. Information System

## System Development Approaches

Developing a successful information system for business application is a challenging task. System development process includes the activities like understanding, planning, designing, implementation and maintenance of

systems. System development approaches have undergone reforms as per the changes in software development technology. Software technology has changed from modular to structure and now to object oriented technology. Basic goal in system development process is to produce high quality information system for solving business applications. It provides a framework that is used to structure, plan and control the process of developing a system. Various methods have been evolved and being practiced over the years. A few major methods are:

- I. System Development Life Cycle method (or traditional method))
- II. Structured Analysis Development method
- III. Waterfall method
- IV. Prototype method
- V. Spiral method
- VI. Object oriented Development method

Each of these methods has its own strengths and weaknesses. One method may not be suitable for all type of systems. It depends on technical nature of a system, organizational requirements, knowledge of developers etc. Basically all these methods follow either *linear* or *iterative* approach or combination of these two approaches for development of systems.

## **LEARNING COMPETENCY**

Explain approaches to systems development

## **ACTIVITIES**

### **ACTIVITY 1**

**Direction:** Answer the following questions briefly.

- 1. Describe how system works?**

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- 2. Explain activities in systems development?**

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## **ACTIVITY 2**

**Direction:** Draw a diagram that will best illustrate how a system works in ICT.

## **REFERENCES**

[CS-1: Lesson 3. TYPES OF INFORMATION SYSTEMS \(iasri.res.in\)](#)

<http://ecoursesonline.iasri.res.in/mod/resource/view.php?id=4699>

Prepared by:

**HAYDEE C. BADUA**

Name of Writer

Noted by:

**LABERNE A.**

**LADIGNON, JR**

Division ICT Coordinator/  
OIC EPS

