

SYSTEMS ANALYSIS & DESIGN

Introduction

by
Roslina Abd Hamid
Faculty of Computer Systems & Software
Engineering
roslina@ump.edu.my



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Chapter Description

Expected Outcomes

- Able to learn about system's concept and characteristics .
- Able to know various types of information systems.
- Explain the systems analyst's role.

References

- J.A Hoffer, J.F. George, and J.S. Valacich, "Modern Systems Analysis and Design", 7/E, Addison-Wesley, 2014
- Kenneth E. Kendall, Julie E. Kendall., "Systems Analysis and Design ", Pearson, 2014
- D. Jeya Mala and S. Geeta, "Object Oriented Analysis & Design Using UML", McGrawHill, 2013
- Alan Dennis, Barbara Haley Wixom, David Tegarden, "Systems Analysis and Design With UML : An Object-Oriented Approach ", John Wiley, 2010
- Klaus Pohl, "Requirement Engineering Fundamentals", Santa Barbara, CA : Rocky Nook, 2011



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Systems

- An organization may also be described as a system where all staff interact with each other to become as a functional unit.
- The organization also communicate with their clients to make a complete business system.
- All businesses system have varied objectives to be achieved.
- These systems have data and information to maintain.



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Systems

A system consist of components working together to make its objective achieve.

Basic components of the system are:

- a. Resources
- b. Procedures/Rules
- c. Data/ Information
- d. Processes/Function



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Resources

- System can be executed but it needs resources.
- Resources such as hardware, software and manpower.
- We also need time and money to ensure the project can be completed
- .
- All resources must be available when needed during project duration.
- Some resources might be shared with other ongoing projects .



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Procedures

- System must function according to procedures or a set of rules define by the organization.
- By following the right standard of procedures the system can achieved targeted objectives.
- Procedures will ensure that the system is in full compliance with the legislative requirements in the organization.



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Data/Information

- Every system must have inputs and useful outputs.
- All these are data or information such as students' name, students' grade or result.



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Processes

- Processes or functions are the operational component of the system.
- Feedback also important component in a system as it shall be used to improve the system



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

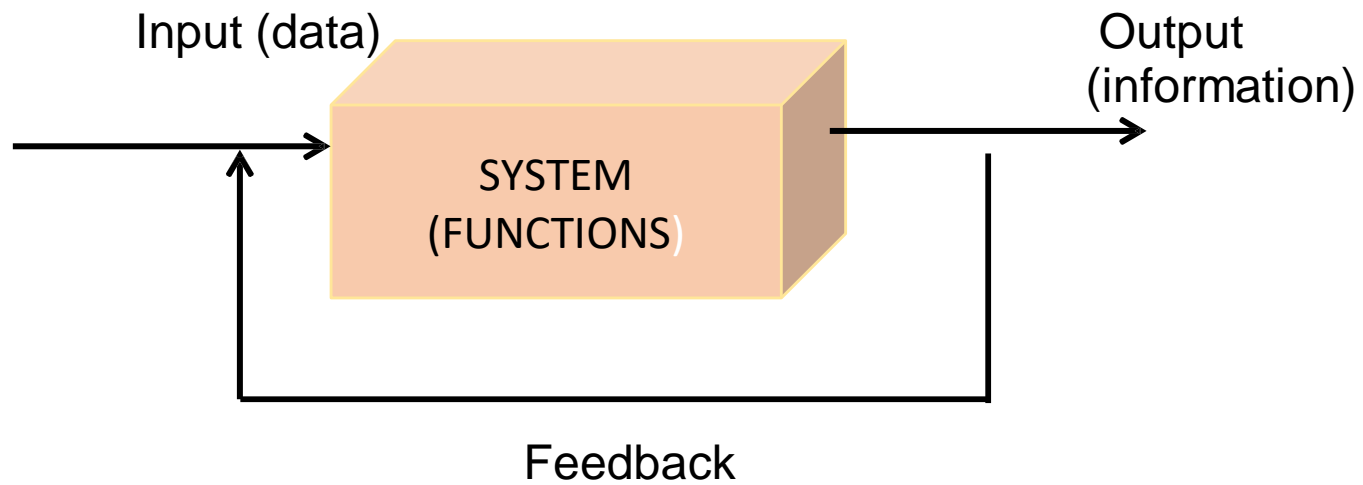


Figure 1.1 shows system relation



Type of Information Systems

There are few types of information systems which relate to the levels of organization

- Executive Information System
- Decision Support System -(Strategic Planning Level)
- Management Information System-(Management Control Level)
- Transaction Support System -(Operational Control Level)



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

The Systems Analyst

Systems analyst role in developing information system :

- i. Analyzing the business situation in the organization
- ii. Identify solution for improvements
- iii. Model the analysis finding toward implement the improvements



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Systems Analyst Responsibility

Interact with many groups of people

Customers/ client

Technical people(network admins, programmers)

Business people (steering committee, stakeholders)

Vendors

Consultants

Variety of specialized roles

Dealing with people throughout project management

Business-oriented

Knowledgeable in technical skill



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Systems Analyst Attributes

- Problem solver
- Like challenge
- Must be knowledgeable of technology.
- The system analyst must be able to communicate in writing and orally.
- Must be a good listener and be able to react to what people say.
- Must be knowledgeable of business.



OER Systems Analysis & Design by Roslina Abd Hamid work is under licensed [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).