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Course code: CSI-311

Course title: System Analysis and Design

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Ans: to the Q: NO: 01

**System Design:** - Refers to the process of defining describing & specifying the architecture components modules interfaces & data for a system design plays a crucial role in ensuring that a system is reliable, scalable, maintainable & able to meet the needs of its users.

**Difference Between system analysis & system Design:-**

| System Analysis   | System Design  |
|---|--|
| <ol style="list-style-type: none"><li>1. System Analysis is the examination of the problem.</li><li>2. It is concerned with elucidation of the specification detailed</li></ol> | <ol style="list-style-type: none"><li>1. System Design is the creator of information system which is solution to the program.</li><li>2. It concerned with identifying all containing.</li></ol> |



## System Analysis

## System Design

3. It deals with data collection & a detailed evaluation of existing file.

4. In system analysis part the main focus on data flow diagram and data dictionary.

5. The system analysis is the problem solving methodology that uses the system orientation to define the problem & to develop the necessary solutions.

3. It deals with general design specification & detailed design specification I/O files & procedure.

4. It also deals with program construction testing & users acceptance.

5. System design is the process of collecting & interpreting facts, identifying the problem & decomposition of a system into its components.

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Ans: to: the: q: NO: 02

A system is a collection can have different meanings depending on the context. In general a system refers to a set of connected components or elements that work together to achieve a common goal or purpose. It can be a complex arrangement of parts that interact with each other, such as a computer system.

There are various types of systems, which can be classified based on different criteria.

Here are a few common types:

1. Physical system.
2. Open or closed systems.
3. Deterministic or probabilistic system.
4. Man-made information system.

The major information systems are:

- Formal information systems.
- Computer based information systems.



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The systems model is a process-oriented representation that emphasizes the influence, or flow, of information between modules.

The steps to systems modelling —

(1) identify the system of interest in particular specify the boundary & specify the level of detail in which you.

Ans: to the: q: NO: 03

There are four basic elements of data flow diagram — processes, data stores, external entities & data flows:

Data Flow Diagram (DFD) is a graphical representation of data flow in any system. It is capable of illustrating incoming data flow, outgoing data flow and store data. Data flow diagram describes anything about how data flows through the system.

Type of DFD:

DFD is of two types: Data flow Diagram





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1) Logical DFD - Flow diagram mainly focuses on the system process. It illustrates how data flows in the system. Logical DFD is used in various organizations for the smooth running of system.

2. Physical DFD - Flow diagram show how the data flow is actually implemented in the system. Physical DFD is more specific & also closer to implementation.

Components of data flow diagram -

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles & arrows plus short text labels, to show data inputs, outputs storage points and the routes between each destination.

Based on which target services subscribe to a particular source, you get a one-to-one, a one of many,

—x—



There are advantages & disadvantages to both approaches. Bottom-up budgeting often results in a more accurate budget, but it also requires significantly more time & resources to complete.

Bottom-up budgeting is a type of budgetary system in which budgets are created from the bottom up rather than from the top down. In other words, bottom up budgeting starts with individual expenses & then aggregates them into department level budgets.

The general process of bottom-up budgeting starts with individual expenses to arrive at a total departmental budget amount which can then be aggregated into the overall budget for the entire organization.

Identifying individual components:

The first step is to identify all of a business's individual components & any projects or initiatives that need to be funded.



7.  
Each of these projects must be analyzed individually at a relatively granular level in order to create an accurate accounting for their costs.

There is a need for one or two group leaders in intance. Better team morale - greater buying from team members because everyone is given the equal opportunity to influence decision & project outcomes regardless of seniority.

A bottom-up approach helps improve employee collaboration as every one is involved in the decision-making process & has input into how things are done.

Application of structured flowcharts -

This performance steps from the fact that flow charts enable easier comprehension & generate fewer errors in human perception.

The structured flowchart helps the mission to create new algorithms by encapsulating a range of data points inside an interlinked illustration. A structured flow chart is one in which all of the processes & decisions must fit into one of a few basic, structured elements.

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