VICTORIA UNIVERSITY BANGLADESH

Assignment On

Course Name : System Analysis and Design

Course code : CSI-311

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CSE-311

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Answer to the question NO: 1

System design: System design is the process of designing the architecture and components of a software system to meet specific business requirements. The process involves defining the system's architecture, components, modules, and interfaces, and identifying the technologies and tools that will be used to implement the system.

Difference between System Analysis and System Design:

System Analysis	System Design
System analysis is the process of gathering and analyzing information to assess the suitability of a current system and to determine the requirements of a new system.	System design is the process of specifying elements of a system such as modules, architecture, components, and their interfaces.
System Analysis focuses on the needs of the user, the current system, and the business processess the system must support	System Design focuses on the design of the system, its architecture, and the components that make up the system.
System Analysis produces the requirements document that describes the desired system	System design produces the design document the describes the architecture and components of the system.
System Analysis is a one-time process that occurs at the beginning of the project.	System Design is an ongoing process that occurs throughout the project.

System Analysis	System Design
System Analysis is the first step in the software development process	System Design is the second step in the software development process.
System Analysis involes minimal risk.	System Design involes significant risk.
System Analysis focuses on problem identification and definition.	System Design focuses on problem - ~~solving~~ solving and finding solutions.

Answe to the question NO: 2

System: The word system is derived from greek wond system, which means an organized relationship between any ~~set~~ set of components to achieve some common caus or objective.

Types of system:

1. Physical or Abstract Systems.
2. open or closed Systems.
3. Adaptive and Non Adaptive system
4. Permanent or Temporary system.
5. Natural and Manufactured system.
6. Deterministic or probabilistis system.
7. Social, Human - Machin, Machine system.
8. Man - Made Information System.

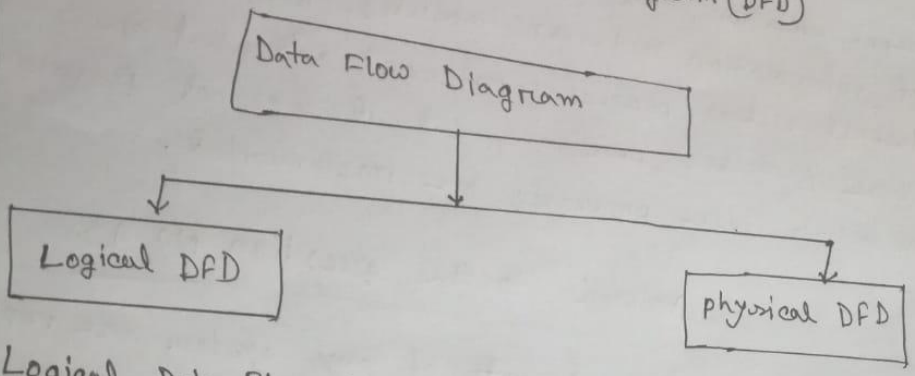
System model: The system model is a process-oriented representation that emphasizes the influences, or flow of information between modules. A systems model describes how processes interact and what operations these processes perform, but it does not go into details as to how these processes are implemented.

Answer to the question NO: 03

Elements: The key elements of any system are inputs, processors, control, feedback, environment, and boundaries interfaces. Inputs are entered into the system for processing, and the processor transforms inputs into valuable outputs defined by control elements.

DFD: Data flow diagrams are powerful visual tools representing information flow within systems. Understanding their types and components is important as each type has a different purpose and components help in creating an accurate Data Flow Diagram (DFD)

Types of Data Flow Diagram (DFD)



Logical Data Flow Diagram:

Logical data flow diagram mainly focuses on the system process. It illustrates how data flow in the system. In the Logical Data Flow Diagram (DFD), we focus on the high-level processes and data flow without delving into the specific implementation details. Logical DFD is used in various organizations for the smooth running of system. Like in a Banking software system, it is used to describe how data is moved from one entity to another.

Physical Data Flow Diagram (DFD):

physical data Flow diagram shows how the Data flow is actually implemented in the system. In the physical Data Flow Diagram (DFD) we include additional details such as data storage, data transmission, and specific technology or soft system components. physical DFD is more specific and close to implementation.

transitions from one state another stele in the system etc.

Answer to the question NO: 4

* Bottom-UP strategy: Bottom up strategy follows the moduller approach the design of the system. It is called so because it starts from the Bottom or the most basic level modules and more towards the highest level modules.

Advantage	Disadvantage
1/ Provides fallback when new system Fails offers greatest security and Ultimatety testing of new system.	1/ Causes cost overruns. New system amany not get sner Trail.
2/ Forces users to make new system work Immediate benefit from new methods and comtrol.	2/ No Fall back it problems arise with new system requires most careful planning
3/ Allows traning and installation without unnecessary use of resources. Avoid large contingencies From risk monetement.	3/ A loang term phaseln causes a problem at whether conversion goes well or not.
4/ Provides exprience and line test before implemention when prefenned new system.	4/ Gives impression that old System is erroneous and it is not.