

- ⇒ Characteristics of a system
- Organisation → Integration
- Interaction → Central objectives
- Interdependence.

System is defined/derived from the Greek word "SYSTEMA"

- ⇒ Elements of a system
- Input and output
- Processor
- feedback
- Boundaries and interfaces
- Control
- Environment

30/01/2024

⇒ Types of System

- Physical and abstract system
- static
- Dynamic

→ Open and closed system

★ Characteristics of open system:-

- Input from outside
- Entropy (Change in demand)
- process output and cycles
- Equifinality (ways to achieve the objective)

→ Man made Information System -

- formal information system

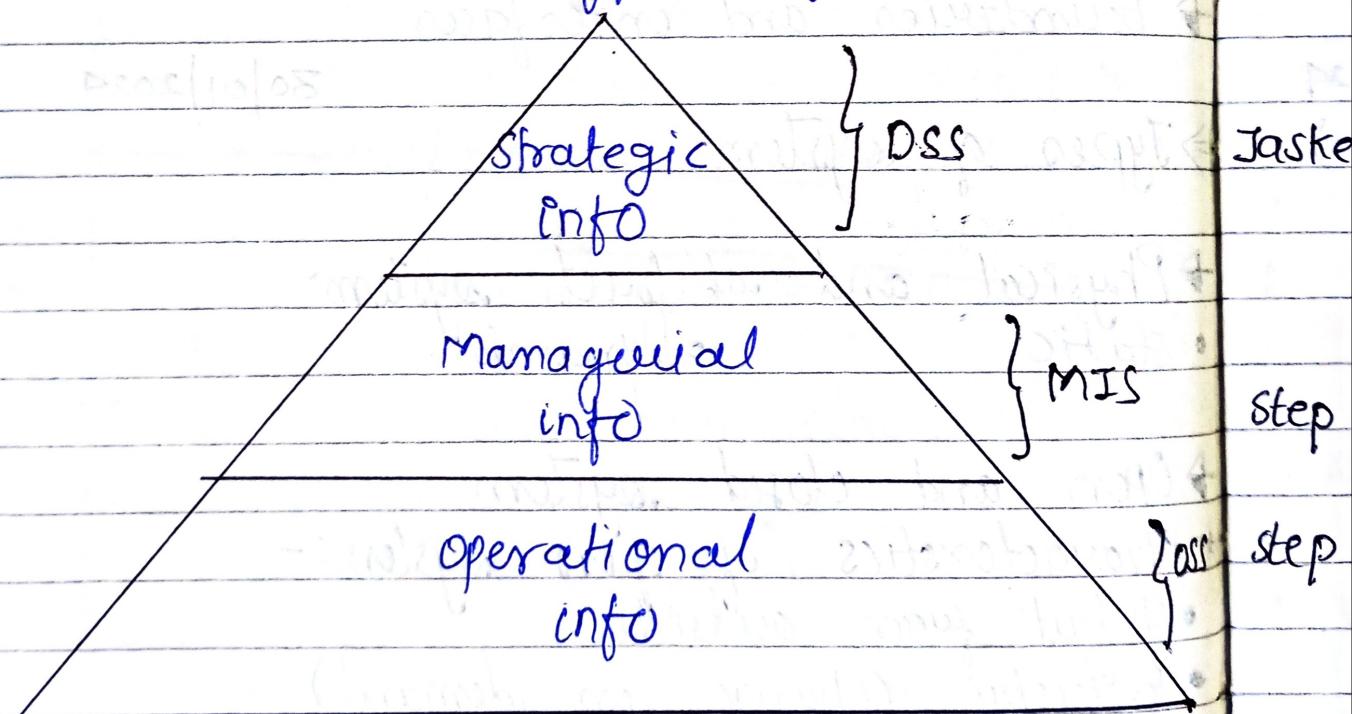
★ Categories of information

- Strategic info
- Managerial info
- operational info

- Informal information System

→ Computer based information System

- MIS (Management information System)
- DSS (Decision support system)



02/02/2024

⇒ Project Termination

⇒ Time constraints → Cost Constraints

⇒ When not fulfilling the user requirement

⇒ Planning and control for System Success

Phases	<ul style="list-style-type: none"> → Initial Investigation → feasibility study → Analysis → Design
Activities	<ul style="list-style-type: none"> → Technical feasibility → operational feasibility → Economical feasibility
Tasks	<ul style="list-style-type: none"> → Identify cost & benefit elements → classifying cost & benefit elements → Using evaluation approach → Documenting result of analysis → Preparing report

Step 1 :- There must be a project plan

Step 2 :- It is recommended to form a project team instead of doing all the work by your own

Step 3 :- The work assignment should be decompose into smaller modules or into different phases.

we can decompose a work into
three different level :-

⇒ Proto

① Task :- The smallest unit of work is Task. It can be performed easily.

② Activity :- The logically related tasks are grouped together and termed as Activity.

③ Phases :- The logically related activities are grouped together and termed as phases.

01/02/2024

System Development Life cycle (SDLC)

⇒ S

- 1.
- 2.

⇒ P

1.

2.

3.

Recognition of need



feasibility study



Analysis



Design



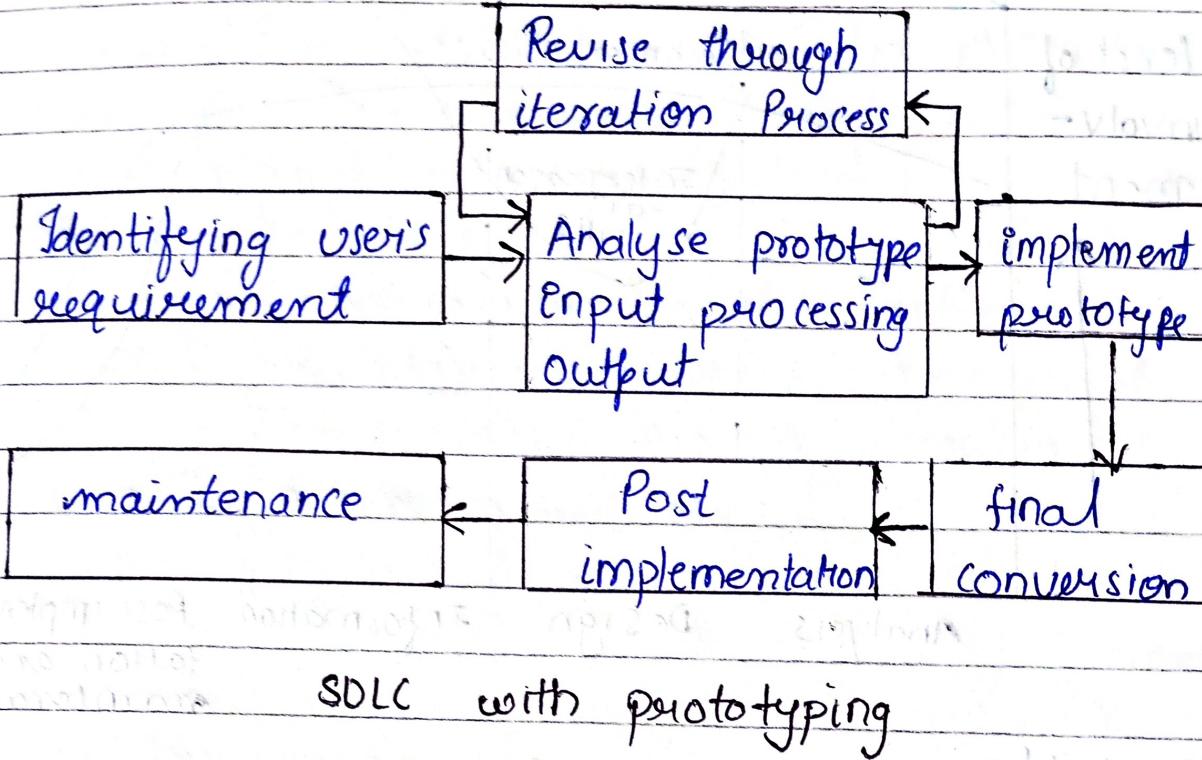
Implementation



Post implementation & maintenance

into

⇒ Prototyping :-

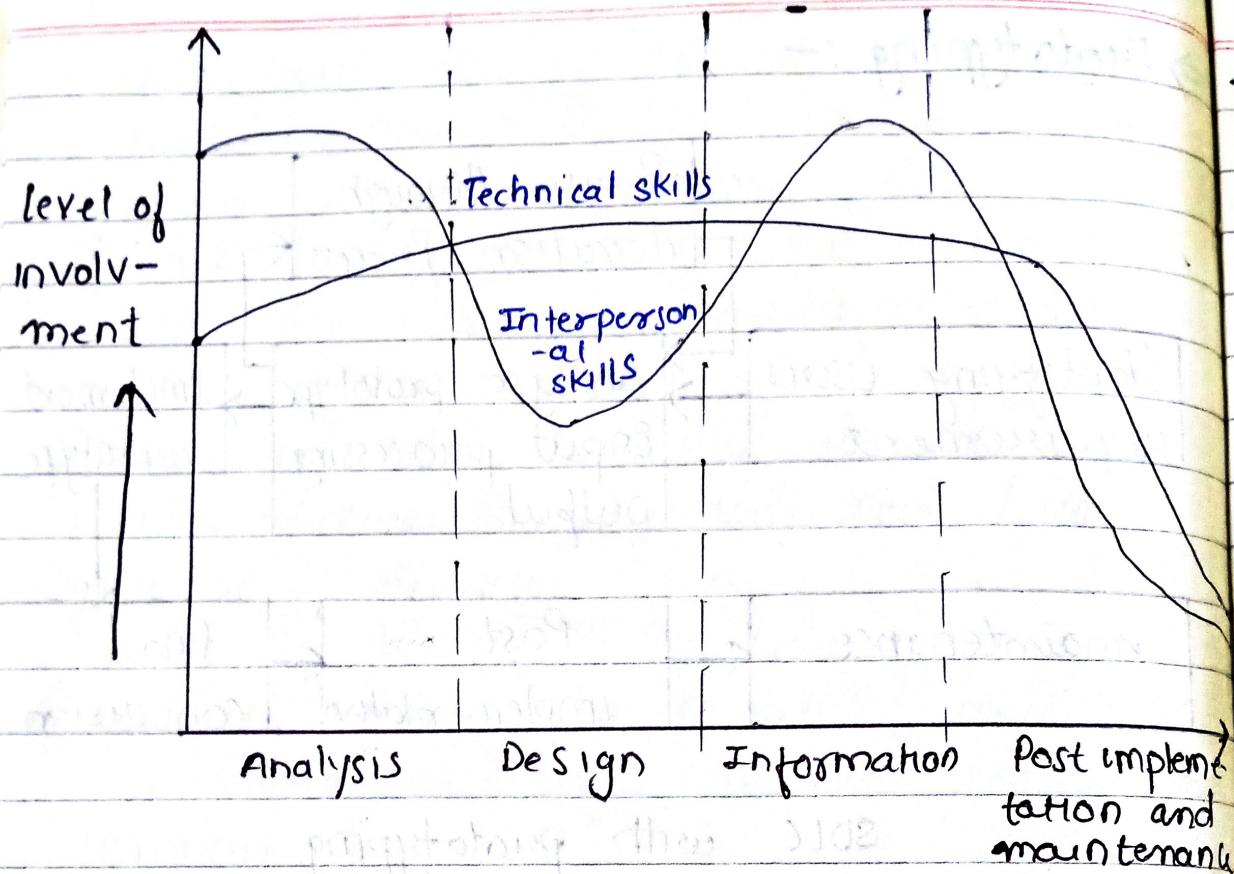


⇒ Draw Back of traditional SDLC

1. It takes more time to design system
2. here it doesn't directly interact with user

⇒ Advantages of prototyping

1. Shorter development time
2. More accurate user requirement can be achieved.
3. Greater participation & support from User.



#Initial steps
 1. Prob
 • Stra
 req
 (a) As

(b) Ge

(c) P

2. Ba

3. fa

-

-

4. fa

5. De

⇒ skills

⇒ Interpersonal skills :-

- Communication
- Teaching
- Understanding
- Selling

⇒ Technical skills:-

- Creativity
- Project management
- Questioning attitude
- Problem solving
- Dynamic interface
- Computer knowledge

⇒ Multifaceted role of system analyst

- Change agent
- Politician
- Sales person
- Investigator & Monitor
- Architect
- psychologist
- Motivator

#Initial Investigation

Steps :-

1. Problem definition and project initiation

- Strategies for determining information requirement :-

(a) Asking :-

- Open ended and closed questions
- Brainstorming (Drawback:- Psychological Pressure)
- Group consensus

(b) Getting information from existing System

- Data analysis
- Decision analysis

(c) Prototyping

2. Background analysis

3. fact finding :-

- review of written document
- on site observation
- Interviews and Questionaries

4. fact analysis

5. Determination of feasibility and preparation

of report

16/02/2024

Data fl

Structured analysis tools

→ Data Flow Diagram (DFD):- A DFD is a graphical or visual representation using a standardized set of symbols and notation to describe a business' operations through data movement. It uses Top down decomposition approach.

⇒ Components :-

- Input information
- Temporary repository
- interaction b/w the data
- represent how we deliver the external information

⇒ Symbols used in DFD by two different Scientists are:-

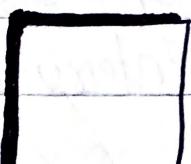
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Internal

External

(source /
destination)

Square

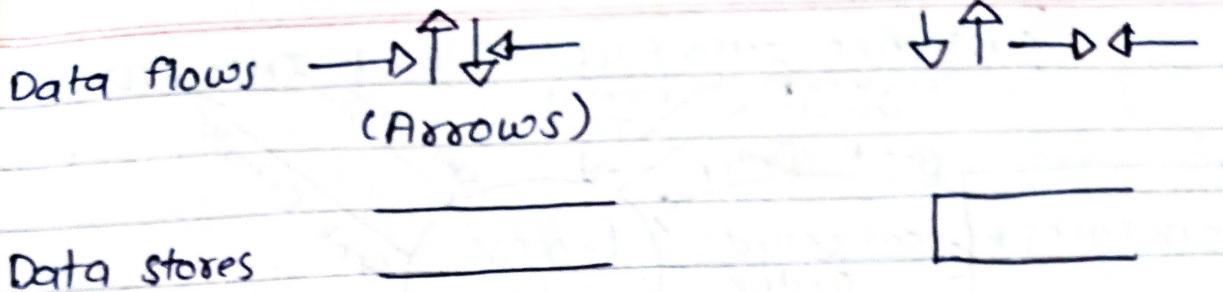


Process



Circle





★ Rules

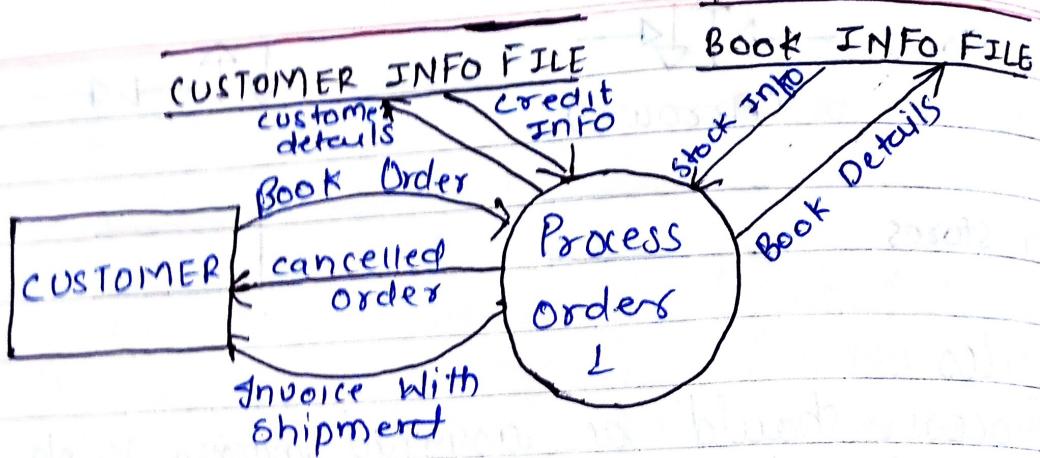
1. Process should be assigned names or no.
2. The direction of process either top to bottom or left to right
3. When a process is decomposed to a lower level they are numbered accordingly
4. The names of data stores, source and destination must be written in capital and the process and data flows first character must be written in capital

→ Physical DFD :- They are implementation dependent DFD

→ Logical DFD :- They are only concern with the logical part that's why they are implementation independent DFD

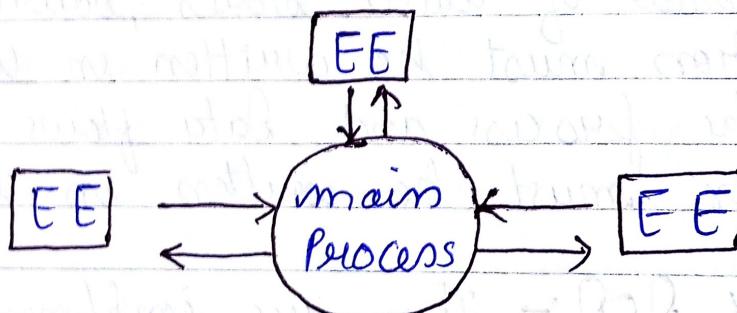
Let us see an example of logical DFD

this diagram is also an example of level 0 (Context diagram) DFD



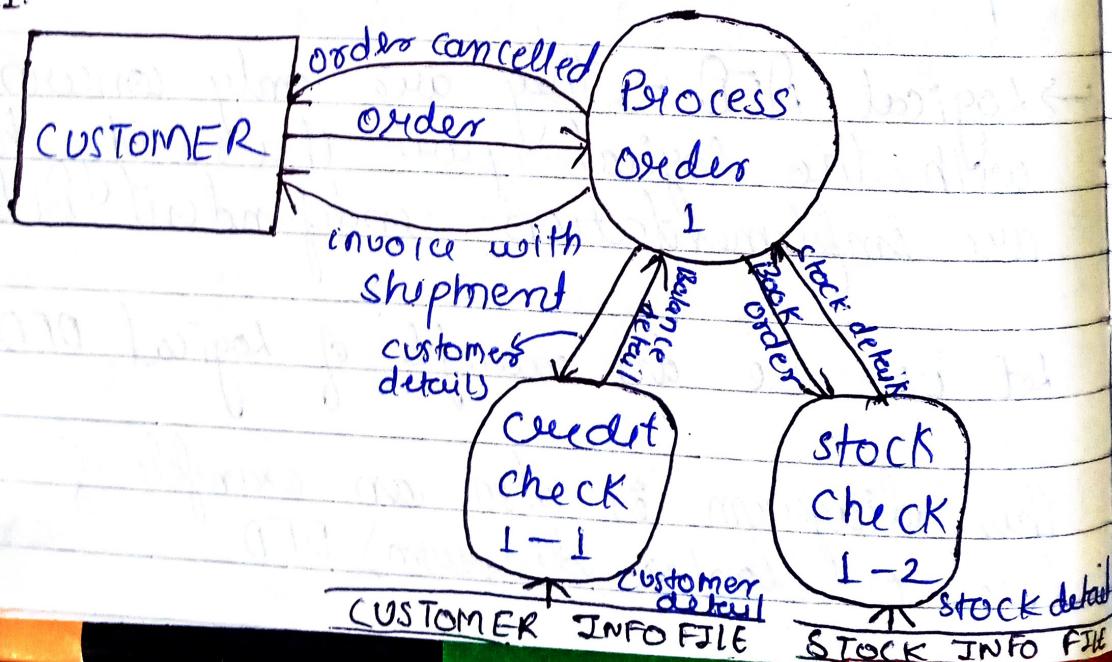
ex 2:-

- Levels of DFD
- Level 0 (Context diagram)



→ Level 1 :-

ex:-



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ex 2:-

