Characteristics of SRS.

① connectness.
② completeness
③ consistency - details
④ unambiguousness. - one meaning.
⑤ ranking for importance.
⑥ Modifiability.   Semantics.

⑦ Verifiability.
⑧ Traceability   forward backward.
⑨ Design independent   what needs to be done?
⑩ Understandable to customer.

Difficulties while writing SRS.

Capability Maturity Model (CMM).
(manufacturing industry → ISO (Intl-standards organisation).
↳ rank software companies

Level-1 - Adhor. (no activity) KPA - key Process Areas.
Level-2 - Repeatable.
Level-3 - Defined
Level-4 - Managed.
Level-5 - Optimized.

KPA required in level 2 are:
1. Requirement Management.
2. Project planning. - time + cost + resources
3. software project tracking + oversight.
4. Subcontract management. - 3rd party module.
5. Software quality assurance.
6. configuration management.

KPA requirements of Level 3:

1. Organisation process focus
2. Training program
3. Organisation process definition
4. Integrated software management.
5. software product engineering
6. Peer Reviews.

KPA requirements of level 4:

1. Quantitative process management
2. Software quality management

KPA requirements of Level 5

1. Defect prevention
2. Technology change management
3. Process change management.

Software company → level 5 (based in India)
CMM + ISO?

Requirements Specification:

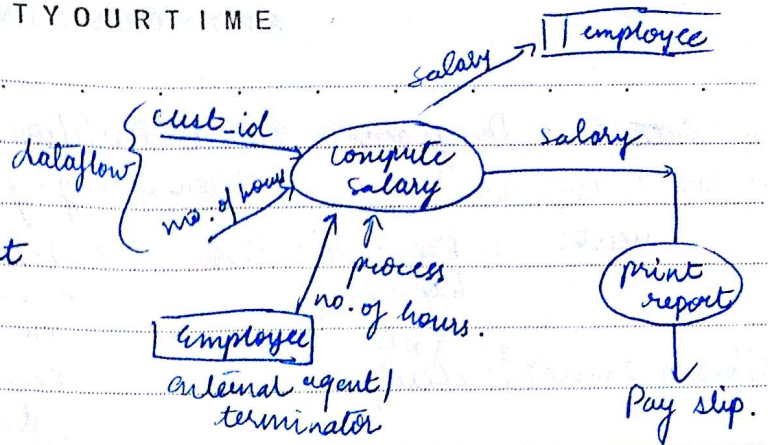| Static View	Functional View	Dynamic View
ER Model	function decomp^n diagram	state transition diagram
Set of object	data flow diagram	
+ relations + attributes	Data dictionary (data about data)	
	process specification	

time depend ent

Data Flow Diagram

Process

Data flow

Terminator / External agent

Store

_____ employee
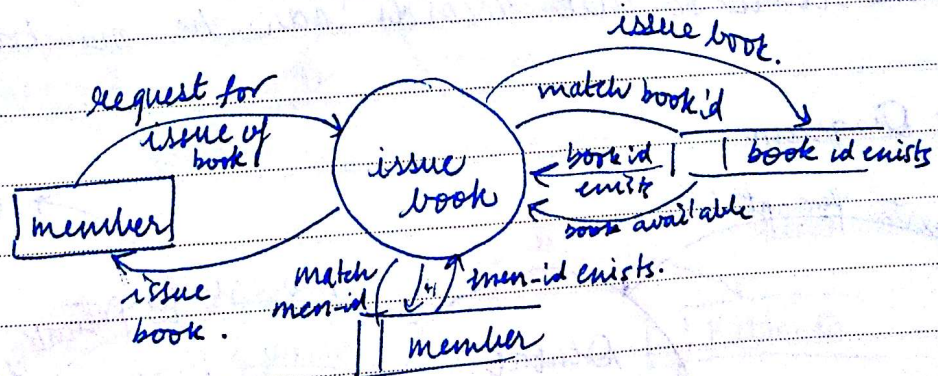
| | employee
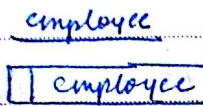
Objects found in ER become stores in data flow diagram.

Level 0 Data flow diagram — Content Diagram.

ask issue of books

book available

book not available

limit crossed

Search books

return book

pays fine

info about books

info about schemes

discount offer

Supplies books

make payment.

member — library mgmt diagram — Supplier
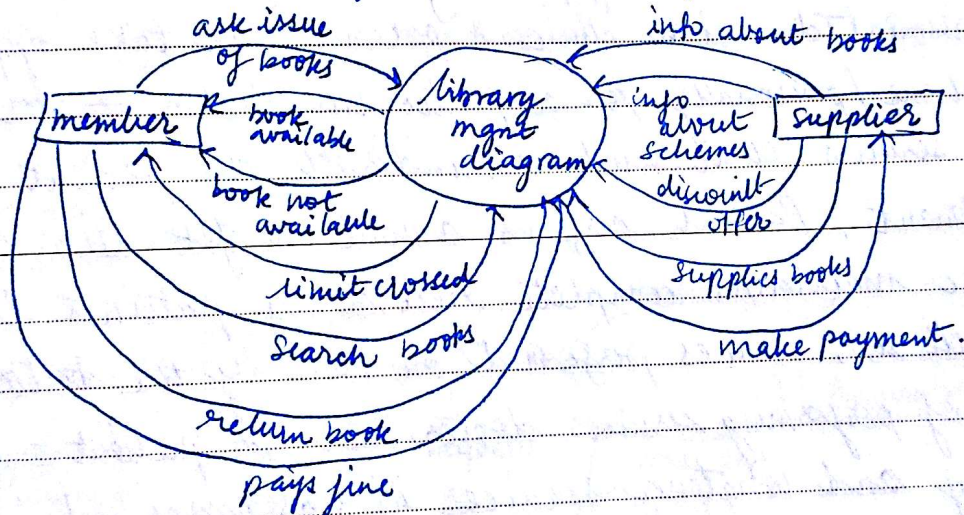
define boundary of the system.

The amount of work required.

request for issue of book

issue book

match book id

book id exists | | book id exists

book available

member — issue book

issue book

match mem-id — mem-id exists.

| | member

level 1 DFD.

0, 1, 2 levels generally.

(return book).

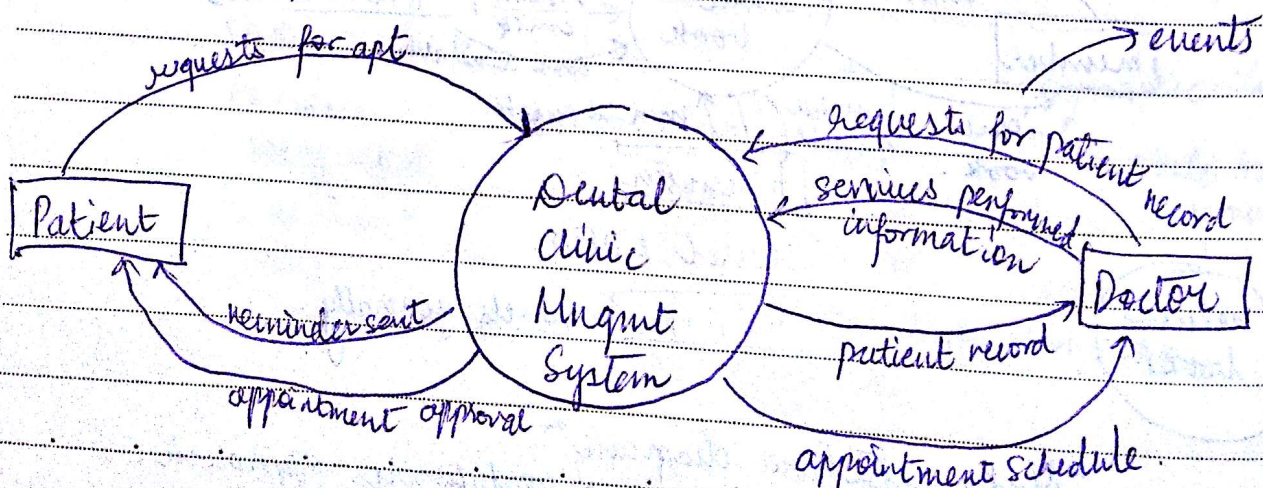→ Make dataflow diagram in classical + event partitioning approach.

Data Flow Diagram – Event Partitioning Approach.

action changing data

Event:

1. Flow Oriented happening in system and changes data

2. Temporal events happening on time based scenarios: daily/monthly/weekly

3. System events/functions triggered once a condition is satisfied.
{ stock co
→ order place }

Dental Management

A clinic is in the business of providing dental service. A number of doctors associated with clinic. A patient can take appointment through phone/personally for a particular doctor of or particular services. Clinic sends reminder to the patient about the appointment. Patient performs a visit to get the services done. Clinic maintains complete record of patients last visit, as well as, services performed on him by the doctor. At the time of performing services doctor asks for patient's last records if any and whatever services he has performed, he informs the clinic so that records can be maintained.

Content Diagram.

requests for apt

→ events

requests for patient record

services performed information

Patient

reminder sent

appointment approval

Dental Clinic Mngmt System

patient record

Doctor

appointment schedule.

Event list:

1. Request for appointment.
2. Reminder sent
3. Apt. denied / given
4. Req. for patient record
5. Services performed information
6. Patient record given
7. appoint schedule of dr.

Data Flows:

req for app [IN] | Appoint date time [OUT]
reminder [OUT]

req. for PR [IN] | Patient record [OUT].