Data flow Diagram (DFD)

- A DFD is the graphical representation of the flow of data from one component to another component in any information system.
- Through DFD we can give the overview of the system without going into the deep detail of the system.
- DFD also known as Bubble chart or data flow graph

Symbols used in DFD :-

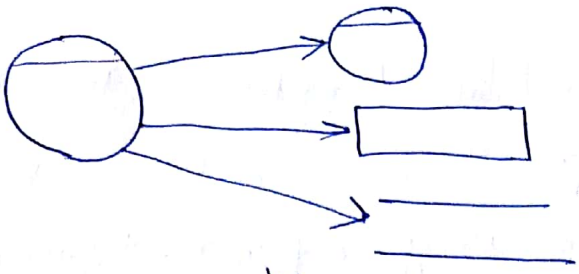
Process — Shows a process that transforms data inputs into data outputs.

Data Flow — Depicts flow of data into or out of ~~data~~ a process or data store.

External Entity or **-Source** or **-Sink** — An External Entity that acts as a source of system Input or sink of system output.

Data store — Data repository: a collection of data items.

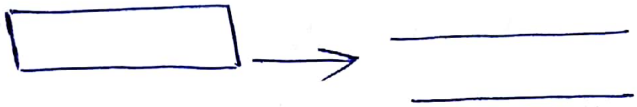
Rules

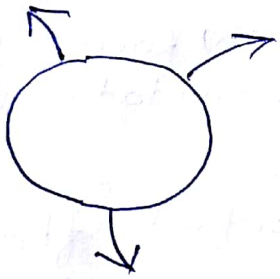
i)  Allowed.

- A process can be connect with any other Process, external entity or data store.

ii)  X Not Allowed.

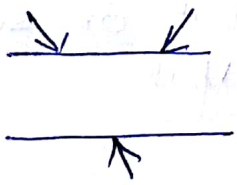
iii)  X Not Allowed

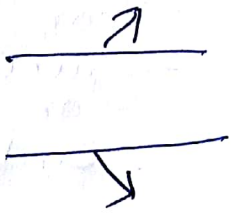
iv)  X Not allowed.

v)  No Miracle / No Blackhole.

miracle Blackhole

vi) No sink / source.





sink Source.

Rules conti.....→

Rules conti....

- Process must have atleast one input and an output.
- Data source must have atleast one data flow in and one data flow out
- Data store must go through a process.
- Process in Data Flow Diagram (DFD) go to another Process or data store.
- unique names are important
- DFD shows flow of data and not order of events like a flowchart.
- Decision Path (diamond nodes ◇) represent — Logical expressions are not specified.

⇒ **Levelling in A DFD**

* DFD can be drawn to represent the system at different Levels of abstraction.

(Level 0, 1) Higher level of DFD's are partitioned/refined into lower levels. that having more information and functional details.

Level – 0 DFD:- Also known as Context — Diagram or fundamental system

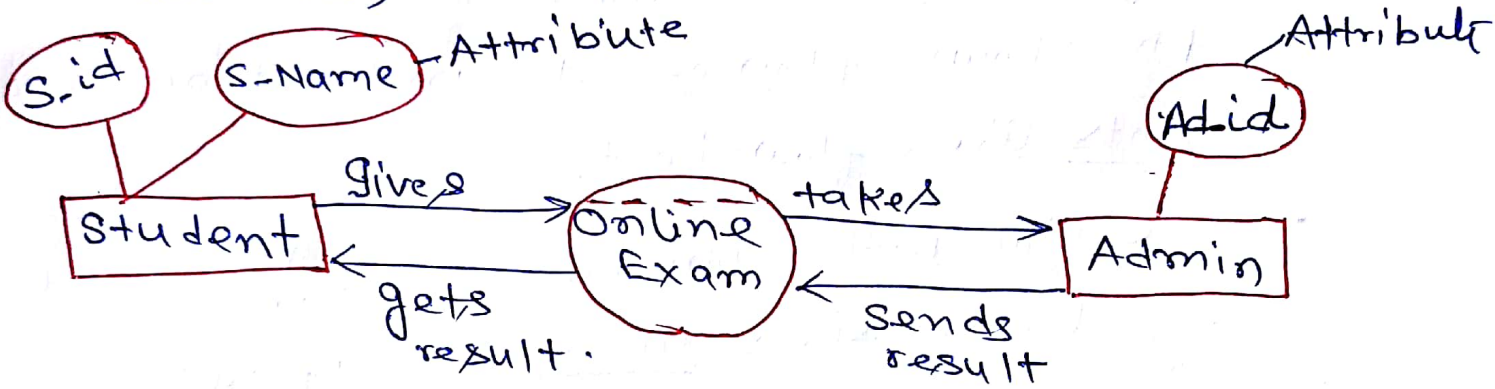
Levelling conti....

Level-0-DFD:- It represent the entire system as a single bubble with input and output data indicated by incoming & outgoing arrows

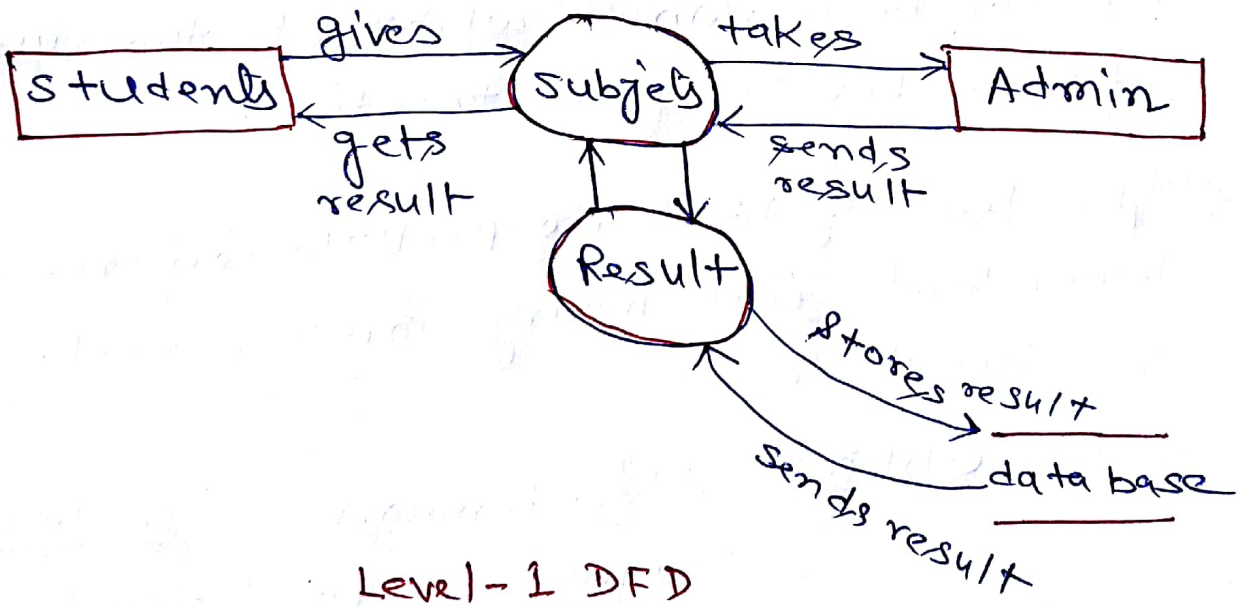
0

1 → Decompose this DFD into multiple bubbles.

2 → Each bubbles is then decomposed into more detailed DFD's,



Leve 0 DFD



Level-1 DFD

Decision Tree and Table

Age	Concession Card	Fee
< 5	—	free
>=5 & <18	—	8/-
>=18 & <55	NO	12/-
	YES	8/-
>=55	—	6/-

Fee Chart.

Decision Table

Conditions	Rules.				
<5	✓				
>=5 & <18		✓			
>=18 & <55 with Concession Card.			✓		
>=18 & <55 without Concession Card.				✓	
>=55					✓
Action					
free	✓				
8/-		✓	✓		
12/-				✓	
6/-					✓