

TUTORIAL - 4

UI9CS012

classmate

Date 29/08/22

Page 20

Q.1. > Give complete description of Hospital management system and draw Level-0- DFD for the given system.

Describe the system as Events, Processes and People involved.

extra added

People Involved - Patients, Doctors, Paramedics, Nurses, Admin, Pharmacist

Events - Emergency, OPD, Surgeries, workshops

Processes can be ① new patient registration, ② new staff reg., ③ patient assigned to doctor, ④ prescriptions record, ⑤ patient history records, ⑥ operations records, ⑦ bills, ⑧ accounts, ⑨ medicines and equipment stocks, ⑩ feedback forms etc. (X)

Q.2. > Then refine the above DFD upto a level where all of them are decomposed successfully.

Q.3. > What are three major types of processes in DFD? How you would identify errors in processes in DFD?

Q.4. > Draw context diagram for Face detection attendance system and water level Alert System of Dom.

Face Detection Attendance System

Input: Visual face

Process: To search Database & match face, update as present

Output:

To user: You are marked present (message)

To system: Updated today's database of student

Water Level alert system.

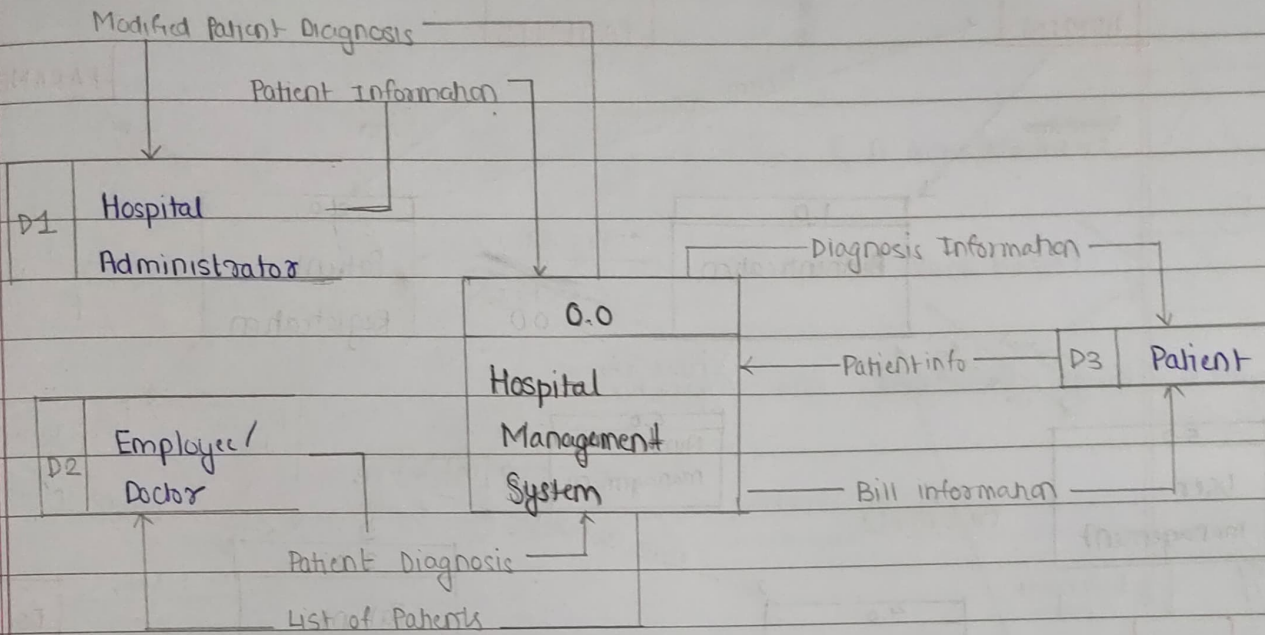
I/p: Continuous sensor data of water presence / submerged in water

Processes: To check with past database of floods, inflow & outflow

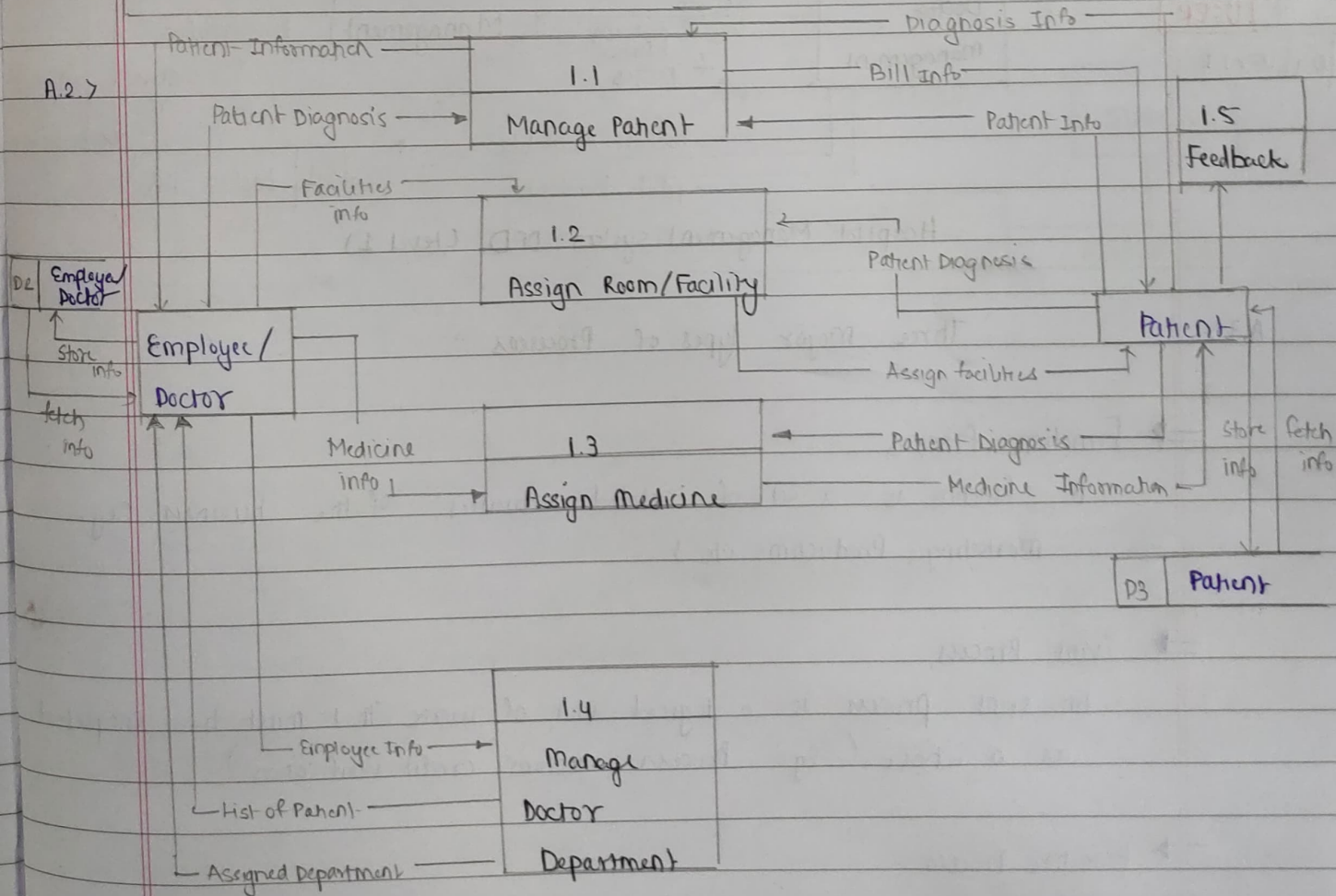
O/p: water is at safe / maximum / danger level & send signal/alerts to other devices (if danger)

Context (Level 0) DFD

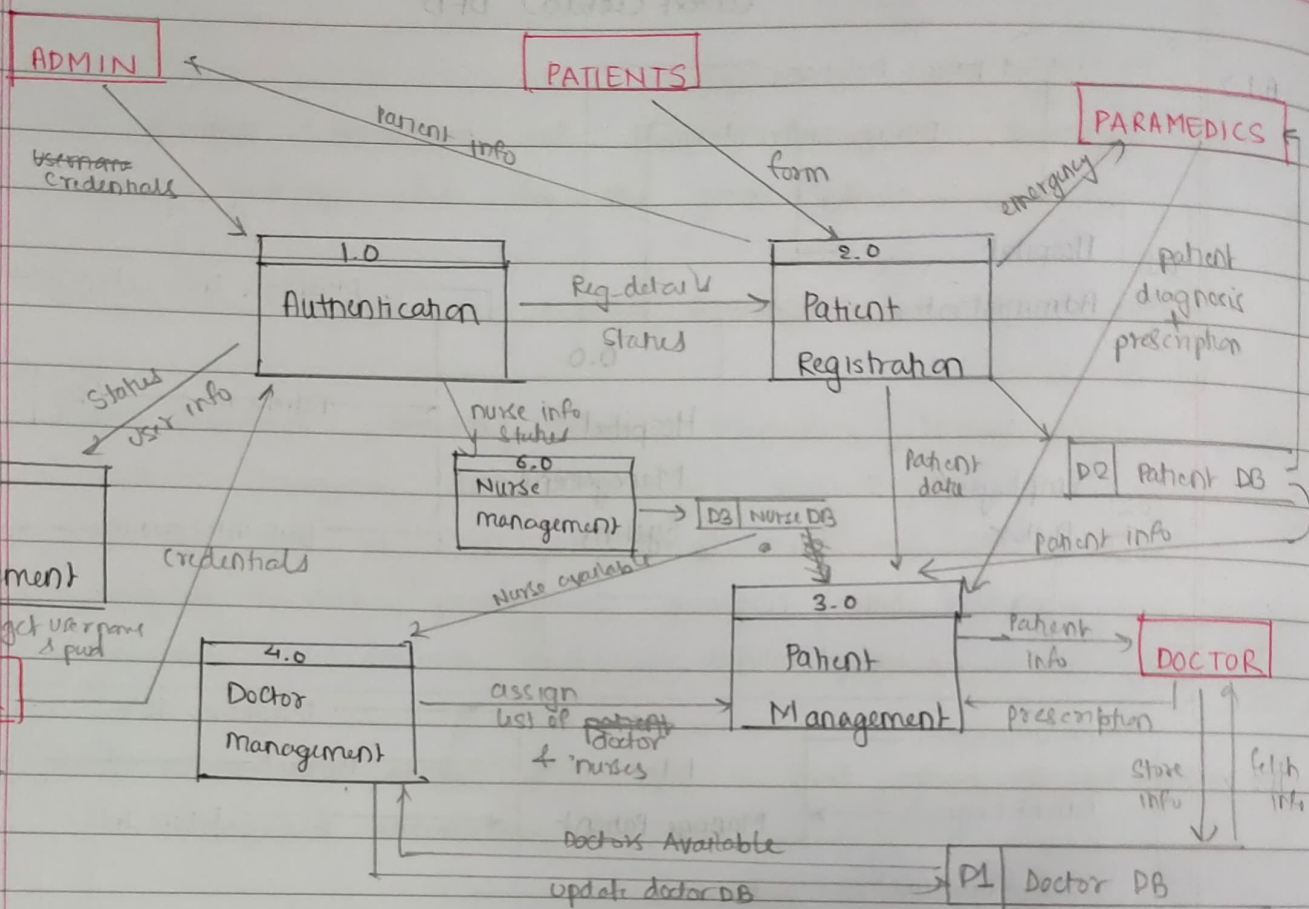
A.1.7



A.2.7



Level 1 Data Flow Diagram



Hospital Management System DFD (Level 1)

A.3. >

Three Major Types of Processes

⇒ Function Process

- A function is a set of related activities of the business (e.g. marketing, Productions etc.)

⇒ Event Process

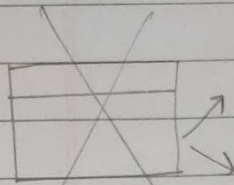
- An event process is a logical unit of work that must be completed as a whole (Eg: Process custom credit verification)

⇒ Primitive Process

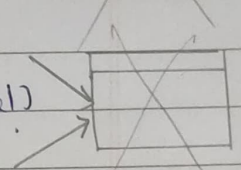
- A primitive process is a discrete, lowest-level activity/task required to complete an event. (e.g. check the credit-card balance)

Rules for Processes

•> No process can have only outputs (A miracle!)



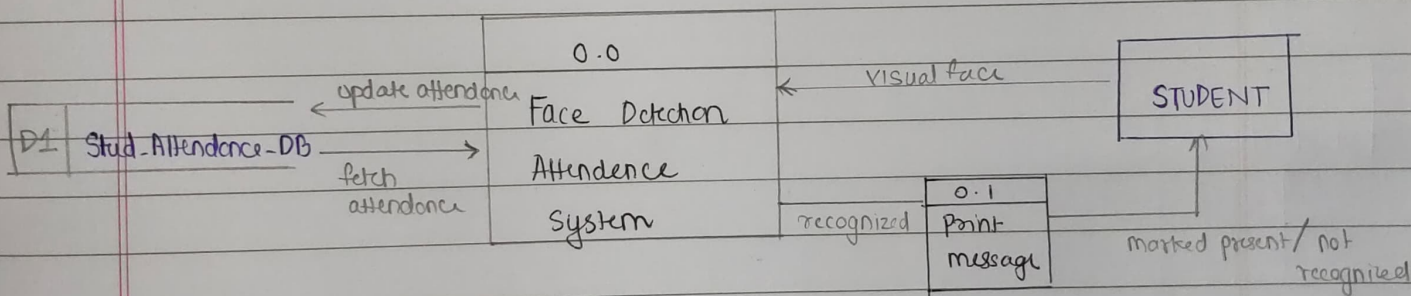
•> No process can have only Inputs (A Black Hole)



•> No process can produce outputs with insufficient inputs (A Gray Hole)

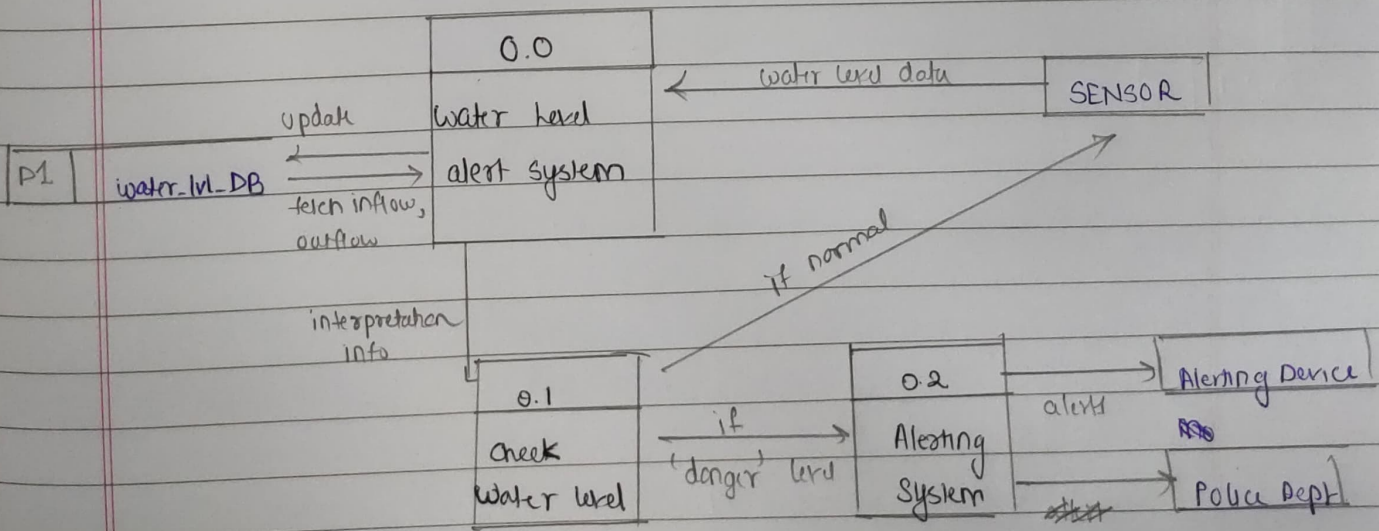
By following above 3 rules, we can find errors in DFD.

B.4. a)



Level-0 - DFD

b)



Level-0 - DFD for water level alerting