**DATABASE MANAGEMENT SYSTEM**

**ICT1222**

**Requirement Document**

HOSPITAL MANAGEMENT SYSTEM

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**Hospital Management System- Ninewells Hospital**

**Features/ Modules of the system to be implemented**

When consider about our endeavor the hospital database management system involves patients’ registration and the store of their medical information. In this system include doctors’ details also, and the entire billing system will be digitalized. It has the ability to assign a unique ID to each patient, and it automatically stores each patient's and staff 's information. It has a search function so you can find out the current state of each room. Using the ID, the user can look up a doctor's availability and a patient's information. And the Administrator handled everything.

A hospital or other medical facility's operation can be managed through the use of a computer or web-based system called a hospital database management system (HDBMS). This solution will contribute to a paperless workplace. All required patient data is present in the hospital database. Doctors can quickly access the disease history, test results, and prescription treatment in order to establish an accurate diagnosis and provide the appropriate treatment.

Watch on the patient's wellbeing. It makes mistakes less likely. A hospital is a facility where people go for general medical treatment.

**List of features to be implemented**

* A doctor's consultation regarding a disease.
* A disease's diagnosis.
* Providing a facility for treatment.
* Patient admissions facility (providing beds, nursing, medicines etc.)
* Vaccination of patients and/or children.
* Many operational tasks
* Keeping a record of the patients' information.
* Creating invoices.
* Recording details on the diagnosis that patients receive.
* Keeping track of the vaccinations given to patients/children.
* Keeping knowledge of various illnesses and the medications used to treat them available

**Requirements of the system**

In this Hospital system, we have to create a database to maintain the details of staffs such as (doctors, nurse, ward boys) and details about departments, patients, what are the medicines provide for diseases, equipment, accounts, who are the suppliers, facilities about laboratories, rooms, and also details of in patients’ family.

There is an entity department. It is identified by department number and it includes location and department name and department includes staff also and it is identified by staff id and there are some attributes like staff name, salary, Dob, Address, Contact number, and work shift and especially a staff works in one department and in one department there are many staffs are working. There are the family members that depend on staff called staff\_family\_member and it is identified by composite keys like relationship name and staff’s primary key here dependence includes dependent name and address, relationship, and contact num. here contact number should be a single value attribute. there are many family members who can include one staff. and a family member depends on one staff

There are we can divide staff into especially three types there are three subclasses in staff those are Doctor, ward boy, and Nurse the doctor is identified by doctor id and the doctor indicates doctor type. The nurse is identified by nurse id. There is an extra attribute like nurse type. The third subclass is ward it has an id and type also as it’s attributes in here ward id is the primary key to identifying the ward boy. All of the staff are divided into this three attributes like full dependency. Ward boy has time and worked date also. there are no any joints in between those three sub-classes.

Ward boy works on the room and the room is identified by room id and has some attributes like room cost, and room type. The nurse also works in the room and she also has work time and date one nurse work in any room and in one room there are many nurses works in there.

One ward boy can work in many departments and in a room and also can work with many ward boys

Every department has rooms and in a department, there can be many rooms and a particular room is in one department. The department has a laboratory also there are lab id and lab name included in the laboratory lab is uniquely identified by the laboratory in one department there **are many laboratories** and a laboratory in the one departmentlaboratory include cost also in the equipment

At the same time laboratory has Equipment and it is identified by the equipment id it has the attribute like equipment quantity and name also and we can say there are many equipments in the laboratory and a equipment can have in many department again at the same time laboratory **gather** tests it is identified by the test id and there are some attributes also included into the test those are like test name and test cost.

When we focus on the equipment supplied by the supplyers they are identified by supplyer id and there are some attributes we can see like his/her name and location, contact number; this c.num can be a multivalued attribute at the same time supplier will supply the medicine also it I identified by the medicine id and there are some attributes like quantity, supplied date, cost, name, stoke\_details here main feature date has two values like m.date and exp. Date and also one medicine can supply from many suppliers and at the same time, one supplier can supply many medicines and also one supplier can supply many pieces of equipment and one equipment get by many suppliers.

There is another entity like patient it is identified by patient id and it is divide into two part such as in-patient and out-patient These sub-classes are overlapped. The patient include pid, name, dob, address, desires, contact number and contact number is a simple value and all of the patients are divided into that two parts. The patient checks the test and the patient includes the result and date also. One patient will take many tests and a test taken by many patients.

Medicine taken by patient and patient will include dosage and the date so we want to know many patents will take may medicines and one medicine will issue to many patient. The doctor will consult the patient and at that time treatment type also will include in the patient side.

One patient is consulted by one doctor and one doctor will consult many patients. A patient will be paid the bill also here the bill is dependent on the patient and it is identified by the bill id and patient id at the same time it has attributes like date, status, method, doctor charge, treatment charge, medication charge, date, time one patient has one bill and one bill payable by the one patient.

In the patient subclasses, the inpatient should include the date and the outpatient will include the date as a composite key its simple form is like the arrival date and discharge date.

Inpatient admits in room one patient will admit in one room and in one room we can admit only one patient due to maintaining the luxury of the hospital. Inpatient also has parent/gardian it is identified by the composite key like guardian name, PID it includes name relationship address and contact number. One patient has one guardian and one gardian has one patient.

Here according to the administration rule they will provide some privileges to their staffs and board of administrators. Such as,

* To doctors, they can all privileges without grant.
* To BOD they want to get the all privileges with the grant.
* Patents want to see only relations and views.
* Staffs in the laboratory the also can all privileges but they cant to do the patient creation.