Design Overview for Hospital Management System

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Summary of Program

Describe what you want the program to do… one or two paragraphs.

Include a sketch of sample output to illustrate your idea.

This program will illustrate the functionality of how Hospital manage the client and also the staff inside that hospital.

Sketch:

```
Please enter your details:
Name: Thang
Date of Birth: 30/11/2005
Contact: 0123456789
Symptoms: "Headaches", "Exhaustion", "Lack of sleep"

You will be assigned to a psychologist

After examination you are having: stress
You should take enough sleep, have a healthier diet and do some exercises

Your record has been stored in the hospital database
```

Required Roles

Describe each of the classes, interfaces, and any enumerations you will create. Use a different table to describe each role you will have, using the following table templates.

Table 1: <<role name>> details – duplicate

Responsibility	Type Details	Notes
_medical_staff:	MedicalStaff	Include information about doctors and nurse
_patient:	Patient	Include patient information and symtoms
_receptionist:	Receptionist	Include information and roles of a receptionist
_patient_record:	PatientRecord	Include: date and description given to the patient
_issue_date:	DateTime	Contains the day, month and year
_is_valid:	Bool	Check if the record is from a medical staff or not
_name:	String	Name of patient or medical staff
_contact:	String	Phone number of the person

_dob:	DateTime	Date of birth of the person
_symptoms:	string[]	Problem the patient are having
_working_hours:	string	Time that a medical staff will be on
_experience:	string	Number of years in the job
Hospital()	void	Contains patient and medical staff data
Manage()	void	Control how many medical staff are available and enable patient record and find it
PatientRecord()	void	Contains feedback given from the medical staff
Receptionist()	void	Can add and remove a patient record
Person()	void	Abstract class represent a human information
Patient()	void	Include patient's personal information and symtoms
Nurse()	void	A medical staff that will update the patient record
SurgicalNurse()	void	A type of nurse will update feedback from a surgeon
PediaricNurse()	void	A type of nurse will update feedback from a pediatric
EmergencyNurse()	void	A type of nurse will update feedback from others doctor type
MedicalStaff()	void	Abstract class inherit from person class
Surgeon()	void	Will give feedback to the patient
Pediatric()	void	Will give feedback to the patient
Cardiologist()	void	Will give feedback to the patient
Psychologist()	void	Will give feedback to the patient
MedicalStaffFactory	void	Create a new Medical Staff

Table 2: <<enumeration name>> details

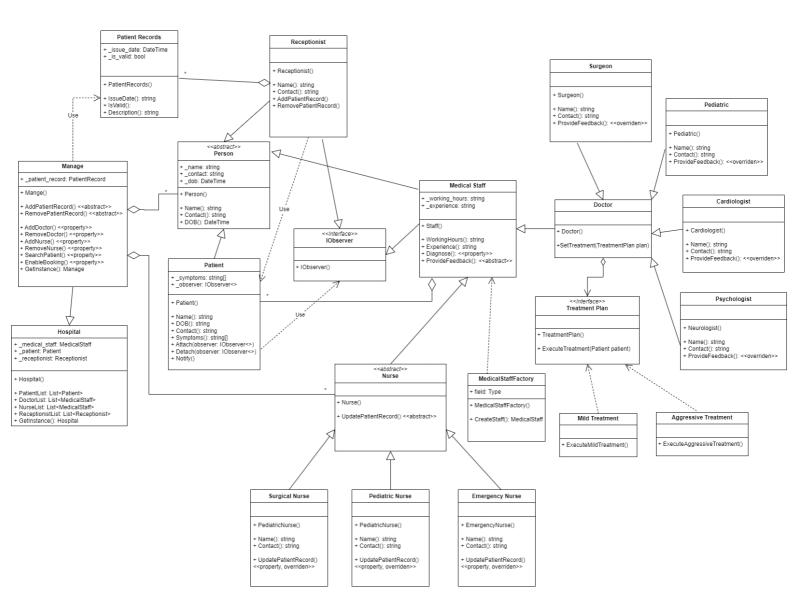| Value	Notes

Class Diagram

Design patterns used:

- Observer Pattern (IOserver interface implemented by medical staff)
- Factory Pattern (MedicalStaffFactory creates various types of medical staff that will make the system more maintainable and also scalable)
- Strategy Pattern (Allow different treatment plans which allow flexibility in treatment strategies)

Sequence Diagram

Receptionist   Manage

AddPatientRecord

EnabelBooking

Medical Staff   Patient   Nurse   Manage

Diagnose

ProvideFeedback

UpdatePatientRecord