مستشفى النور التخصصي
Al-Noor Specialist Hospital

Patient Experience Management System

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1- Project Idea :

The project is Patient Experience Management System through which visitors, escort and patients may provide feedback, complaint, or request service to the Patient Experience Department of a hospital. It offers a faster way of sorting, monitoring, and problem solving while it affords transparency as well as swift feedback.

- **target user** :

- **Patients**
- **escort (family members or friends of the patient)**
- **Visitors**
- **Hospital staff (Patient Experience employees)**
- **Department managers**

2- The app's core objectives are :

- Provide a simple and systematic way through which patients, visitors, and escort can place complaints, suggestions, or requests for treatment.
- Facilitate the hospital staff to process requests submitted with ease, screen them, and respond effectively.
- Empower the departmental managers to monitor problems of their respective units and take appropriate action accordingly.
- Enhance patient experience and improve patient satisfaction by tracking issues systematically and addressing concerns.

3- Explain the problem :

Hospitals today grapple with manual patient feedback management, which translates to inefficiency, delayed response, and lack of transparency in issue resolution. Moreover, unstructured or paper-based request submission results in data loss and delayed processing.

4- the solution :

The planned system facilitates submission and resolution of complaints and feedback through an orderly and easy-to-use online forum that guarantees:

- Simple submission of complaints and feedback
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- Effective tracking and classification of issues
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- Faster response by the concerned agencies
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- Greater transparency to the parties involved

5- Software Requirements

1. **Frontend Technologies:** React, HTML, CSS, JavaScript
2. **Backend Technologies:** Node.js, Express.js
3. **Database:** PostgreSQL or MySQL
4. **Authentication & Security:** JWT authentication, role-based access control
5. **Hosting & Deployment:** AWS/GCP/Azure
6. **Storage:** Cloud storage for uploaded files (e.g., AWS S3 or Firebase Storage)

6- External Interface Requirements

1. **User Interface Requirements:**
- **A simple and user-friendly interface for each user category.**
- **Responsive design compatible with desktops and mobile devices.**
2. **Hardware Requirements:**
- **Compatible with tablets and smartphones.**
3. **Integration with Other Systems:**
- **Integration with hospital internal systems to verify patient data.**

7- Description of All Designed Screens and Their Purpose

1. Request Submission Interface:

- Enter user type (Patient, escort, Visitor)
- Enter name, phone number, and file number (if applicable)
- Select the target department
- Choose request type (Complaint, Suggestion, Service Request)
- Enter submission date
- Enter subject and description
- Optionally attach files
- Submit request button

2. Patient Experience Employee Dashboard:

- Search field for requests by request number
- Filter button (sort by department, date, request type)
- Table displaying requests (request number, subject, service type, date, status)
- Button to view details for full request information
- Text field for responding to the request and resubmitting if needed

3. Department Manager Dashboard:

- Table listing department-related requests (request number, subject, date)
- Button to view details, including issue description and attached files
- Text field to provide a response
- Submit response button to resolve the issue

8- User Flow

1. **Request Submission Flow (Patient or Visitor):**
- The user logs in and selects their type.
- Fills in the complaint or request details and submits it.
- The data is stored, and a request number is generated automatically.
2. **Patient Experience Employee Flow:**
- Logs into the dashboard.
- Views new requests.
- Filters requests or searches for a specific request.
- Reads details and responds as needed.
3. **Department Manager Flow:**
- Logs in and views requests related to their department.
- Reviews details and uploads a response.
- Marks requests as resolved.

9- Non-Functional Requirements

- **Security:** Data encryption, authentication, role-based access control.
- **Performance:** Quick response time (<2 seconds for API requests).
- **Scalability:** Support for an increasing number of users and requests.
- **Usability:** Simple and intuitive interface.

10- Functional Requirements

1. **User Management:**
- Login and account creation based on roles.
- Authentication using JWT.
2. **Request Management:**
- Input required request details.
- Support for file uploads.
- Automatic request number generation.
3. **Search and Filtering:**
- Search by request number.
- Filter by department, date, and request type.
4. **Status Tracking:**
- Update request status (Under Review, In Progress, Resolved).
- Notifications for status changes.
5. **Admin and Manager Controls:**
- View department-specific requests.
- Submit responses and update status.

11- User Story

A patient, visitor, or an escort should be able to lodge a complaint, request, or suggestion in time so that they raise the issue without wasting time on paperwork. The Patient Experience staff should be able to search and filter the requests submitted so that they resolve and respond to complaints effectively. The department manager should read and respond to assigned complaints and service requests so that they resolve issues effectively and provide quality services. The requester (patient, companion, or visitor) wishes to be informed of the status and result of their request when they have submitted it.

12- Scenario

A patient, escort, or visitor comes to the hospital and goes to the Patient Experience office. The person logs in and chooses the "Submit a Request" option. The user selects the type of the request by clicking on the category; if he or she is a companion or patient, he or she types in the patient file number must be 6 digit , but if he or she is a visitor, the file number option will be disabled. The user enters the mandatory information, such as name,ID must be 10 digit , phone number must be 10 digit, issue department, service type (Complaint, Suggestion, or Service Request), date of experiencing the issue, and issue description. They

may choose multiple departments in case the issue lies with more than one and can also add supporting documents or photos. As soon as the user submits the request, the system allots a unique request number and confirms submission. The user receives an SMS or email with his/her request number for tracking.

After sending the request, a page opens containing a tab with three options: close, enlarge, or reduce the page. At the bottom, the title contains the request number, and at the bottom, the contents appear, including the type of procedure, file number, department, and date, and below it, the subject and description.

The staff of Patient Experience logs in to the system and views the "Request Management" page, where they have a list of all their requests. They can search for a request by request number or filter requests by department, date, or type. When they select a request, they view its details, which include the description, attachments (if any) and the status. If required, the staff adds comments or transfers the request to the concerned department for action.

The department manager logs in to the system and opens the dashboard, which shows them the summary of all the pending requests and complaints in their department. They choose one of the requests and view information like request number, date, description of the problem, and whether there are attached images or documents. The manager is able to enter a comment in order to update the status or ask for further information or mark the request as "Resolved" if the issue has already been resolved. When resolved, a notification of an update is sent to the initial requester via email or SMS.

The requester gets an SMS or email alert that his or her request has been updated. He or . she logs into the system or goes to the Patient Experience office to check. The request details page indicates the most recent updates, which include the department's reply, any action taken so far, and if the problem is flagged as "Resolved" or "Pending further action." If further clarification is necessary, the user can post a follow-up response.

13- User Interface

* APPLICANT: ▼
PATIENT
PATIENT COMPANION
VISITOR

* FILE NUMBER:

* NAME:

* ID

* PHONE NUMBER:

* DATE:

* Department   ▼
IT
ICU
INTERNAL MEDICINE CLINIC

*TYPE OF PRPROCEDURE   ▼
SUGGESTION
COMPLAINT
SERVICE REQUEST

* SUBJECT:

* MESSAGE:

Upload

SEND

• APPLICANT: ▼

PATIENT

PATIENT COMPANION

VISITOR

• FILE NUMBER:

• NAME:

• ID

— ▢ ✕

#ORDER NUMBER

DATE   FILE NUMBER   APPLICANT   TYPE OF PROCPROCEDURE

SUBJECT

Description

SERVICE REQUEST

• SUBJECT:

• MESSAGE:

Upload

SEND

SEARCH BY ORDER NUMBER:

TYPE OF PROCUDE ■ DATE ■ DEPARTMENT ■

VIEW ALL DETDETAILS	DATE	TYPE OF PROCPROCEDURE	SUBJECT	ORDER NUMBER
■				
■				
■				
■				
■				

SEND REPLY

SEND

TYPE OF PROCUDE ■ DATE ■ DEPARTMENT ■

VIEW ALL DETDETAILS	DATE	TYPE OF PROCPROCEDURE	SUBJECT	ORDER NUMBER
■				
■				
■				
■				
■				

DESCDESCRIPTION

SEND ANOTHER REPLY

SEND

* ORDER NUMBER

* SUBJECT

* DATE

* Description

BACK