

NFC Healthcare Architecture Document

1. Application Architecture Choice

In this NFC Healthcare system, the chosen architecture is Monolithic Architecture. This architectural style is particularly suited for applications that are simple, self-contained, and do not require distributed components...

2. Application Diagrams

2.1 Use Case Diagram

This use case diagram illustrates how the Healthcare Provider interacts with the system to:

- Read NFC UID
- Scan Prescriptions
- Save Patient Data
- Export Patient Data to PDF
- View Email Logs

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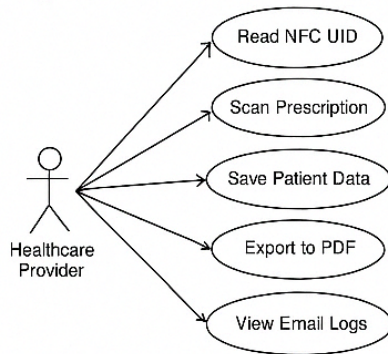
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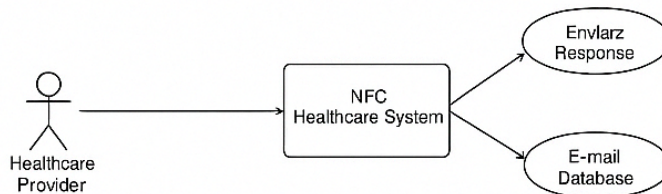
A monolithic architecture for the NFC Healthcare system has been chosen: a Monolithic architecture used for the application. The standard architecture is the NFC application, Monolithic architectures, components such as front end, business logic, and patient data management. Advantage includes scalability, development, and reduced latency. Disadvantages are:

2. Application Diagrams

2.1 Use Case Diagram

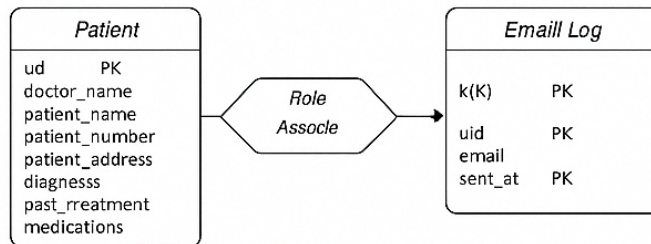


2.2 Data Flow Diagram (DFD)



3 Database

3.1 ER Diagram



3.2 Schema Design

```
CREATE TABLE "patients".
qid TEXT PRIMARY KEY,
doctor_name NULL,
patient_name NULL,
patient_number NULL,
patient_address NULL,
diagnosis,
past_treatment,
medications,
prescription
```

```
CREATE TABLE "patient"()
id INT2 GENERATED BY DEFAULT AS IDENTITY,
uid TEXT,
email TEXT,
sent_at TEXT
)
```

2.2 Data Flow Diagram (DFD)

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In this Data Flow Diagram:

- The Healthcare Provider inputs data through the NFC Healthcare System.
- This system interfaces with two main outputs:
 - Email Database for storing dispatch logs
 - Envlarz Response (external service or processing module)

3. Database

3.1 Entity Relationship (ER) Diagram

The ER diagram defines the relationship between Patients and their associated Email Logs.

- Each patient is uniquely identified by a UID.
- The email_logs table logs all email dispatches related to patient records.
- One-to-many relationship exists: One patient can have multiple associated email log entries.

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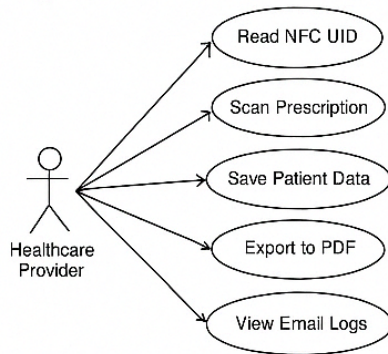
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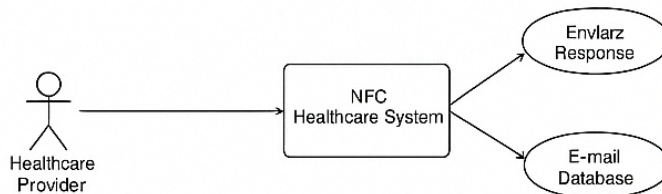
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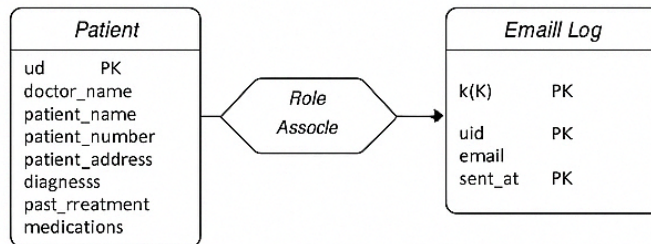


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CREATE TABLE "patients".
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  patient_name NULL,
  patient_number NULL,
  patient_address NULL,
  diagnosis,
  post_treatment,
  medications,
  prescription
```

```
CREATE TABLE "patient"()
  id INT2 GENERATED BY DEFAULT AS IDENTITY,
  uid TEXT,
  email TEXT,
  sent_at TEXT
}
```

3.2 Schema Design

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```
CREATE TABLE patients (  
    uid TEXT PRIMARY KEY,  
    doctor_name TEXT,  
    patient_name TEXT,  
    patient_number TEXT,  
    patient_address TEXT,  
    diagnosis TEXT,  
    past_treatment TEXT,  
    medications TEXT,  
    prescription TEXT  
);  
  
CREATE TABLE email_logs (  
    id INTEGER PRIMARY KEY AUTOINCREMENT,  
    uid TEXT,  
    email TEXT,  
    sent_at TEXT,  
    FOREIGN KEY(uid) REFERENCES patients(uid)  
);
```

4. Data Exchange Contract

The system manages the exchange of data primarily through local files and email services...

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5. Diagram Overview

- Use Case Diagram
- Data Flow Diagram
- ER Diagram
- Class Diagram
- Sequence Diagram
- Deployment Diagram

6. Conclusion

The NFC Healthcare application exemplifies a lightweight, self-contained healthcare management system...