

# **Software Design Document**

## **for**

# **Online Doctor Appointment System**

**Prepared by**

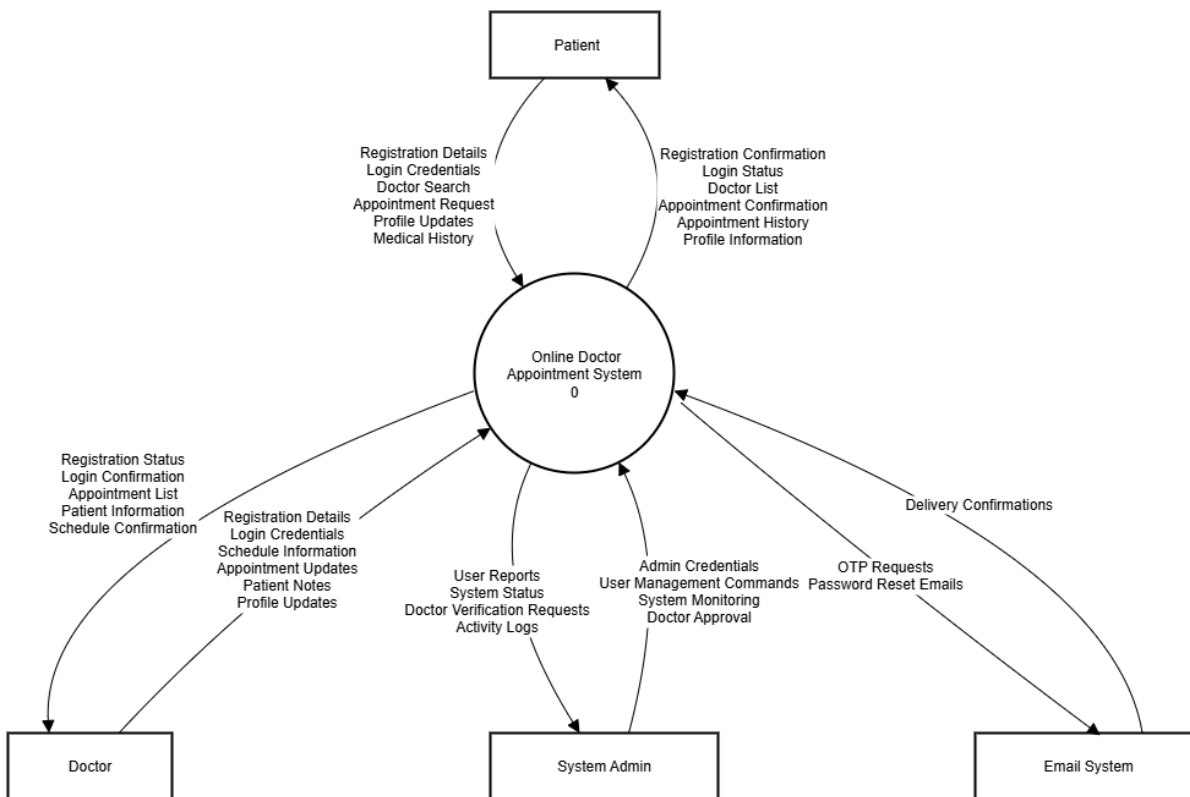
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**K.Udayram - 231IT032**

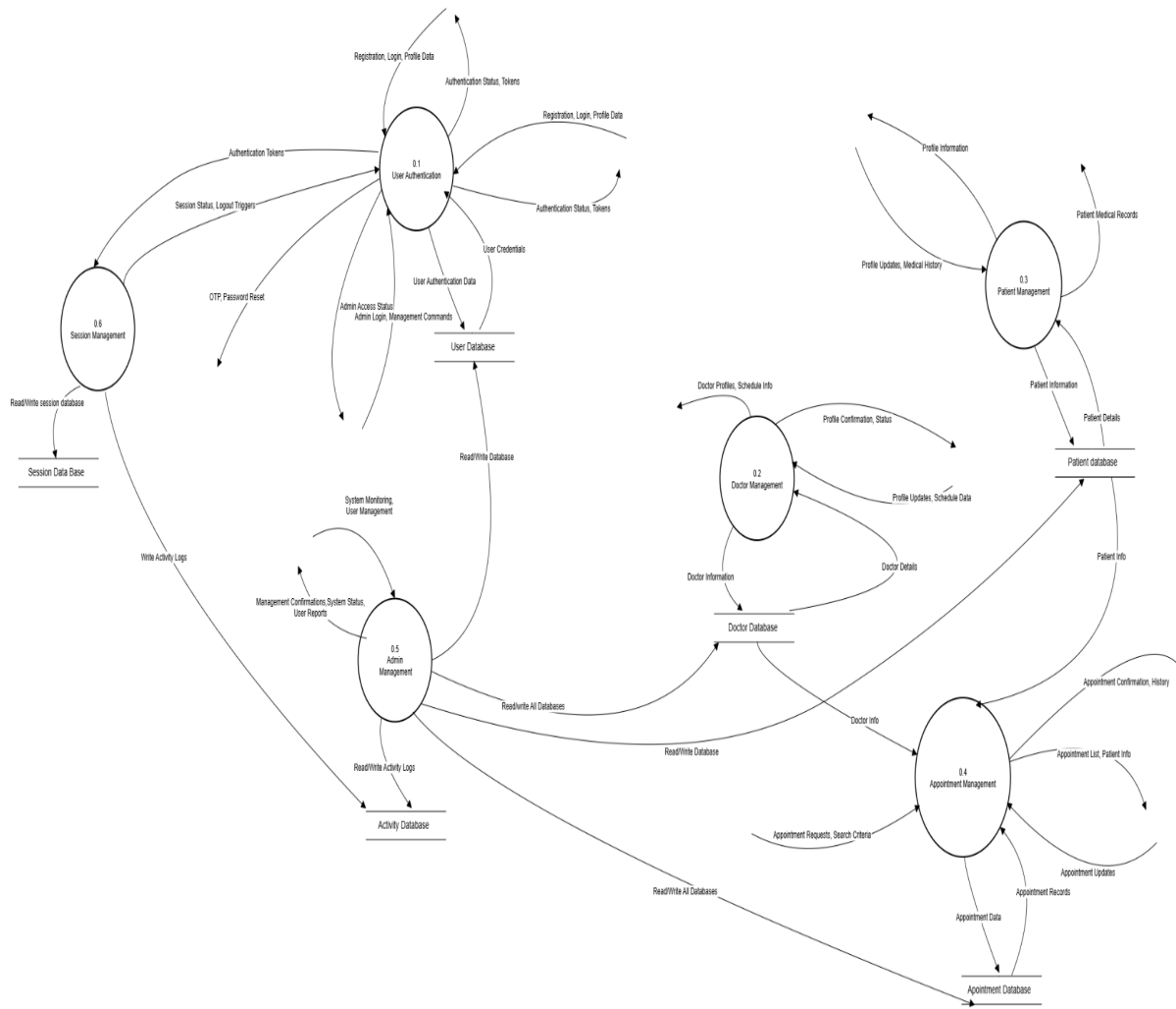
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# Design Flow Diagram

## Level - 0 :

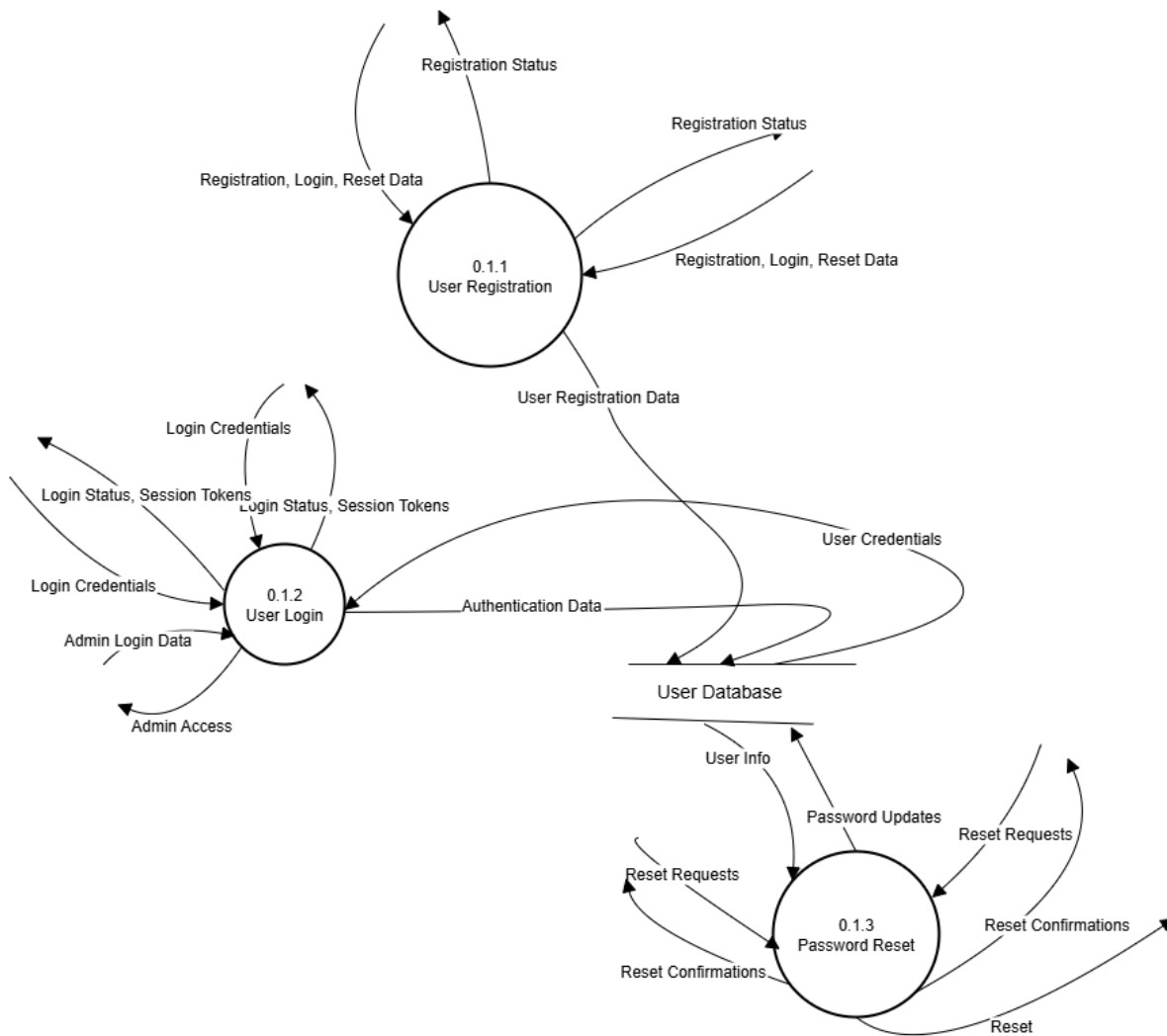


## Level - 1 :



## LEVEL - 2 :

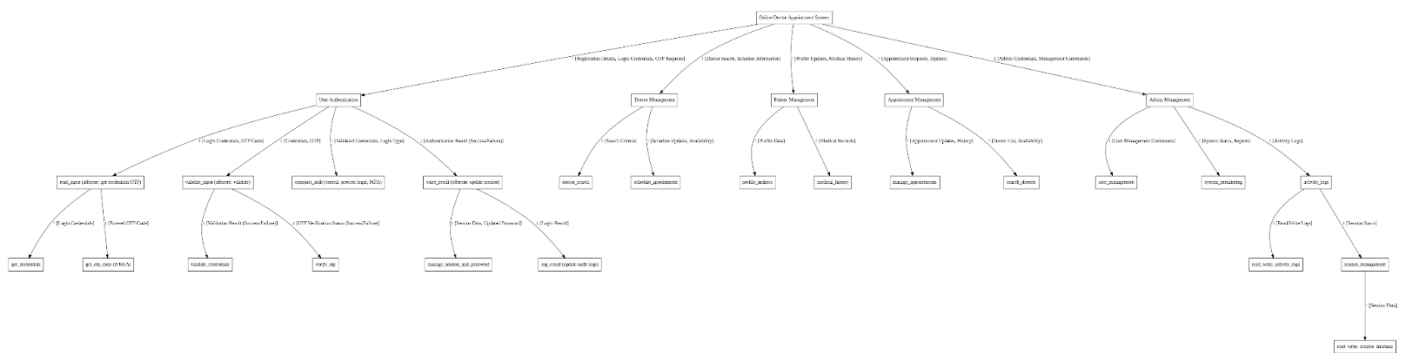
### Authentication Management :



## Appointment Management :



### Structure chart :



Link for structure chart :

<https://drive.google.com/file/d/1Yg7QSe2o2DLzUWZKEwNkHFJU-u6LpAR8/view?usp=sharing>

## Data dictionary for the DFD model of Online Doctor Appointment System:

**user-record:** {user-id + name + email + password + phone + role + registration-date}

**patient-record:** {patient-id + name + age + gender + phone + email + address + medical-history + allergies}

**doctor-record:** {doctor-id + name + specialization + qualification + experience + schedule + contact-info + verification-status}

**appointment:** {appointment-id + patient-id + doctor-id + date + time + status + notes}

**login-credentials:** {email + password}

**registration-data:** {name + email + password + phone + role + additional-info}

**schedule:** {doctor-id + available-dates + time-slots + booking-status}

**medical-history:** {patient-id + conditions + medications + allergies }

**notification:** {notification-id + recipient + message + type + timestamp + status}

**admin-command:** {command-type + target-user + parameters + timestamp}

**report:** {report-id + type + data + generated-date + requested-by}

**otp-request:** {email + otp-code + purpose + expiry-time}

**email-data:** {recipient + subject + body + sender + timestamp}

**user-id:** string

**patient-id:** string

**doctor-id:** string

**appointment-id:** string  
**notification-id:** string  
**report-id:** string  
**name:** string  
**email:** string  
**password:** string  
**phone:** string  
**role:** string  
**registration-date:** date  
**search-criteria:** string  
**filters:** string  
**location:** string  
**specialization:** string  
**age:** integer  
**gender:** string  
**address:** string  
**medical-history:** string  
**allergies:** string  
**qualification:** string  
**experience:** integer  
**schedule:** {available-dates + time-slots}  
**contact-info:** {phone + email + address}  
**verification-status:** boolean  
**date:** date  
**time:** time  
**status:** string  
**notes:** string



**additional-info:** string  
**available-dates:** [date]  
**time-slots:** [time-range]  
**booking-status:** string  
**conditions:** string  
**medications:** string  
**previous-treatments:** string  
**recipient:** string  
**message:** string  
**type:** string  
**timestamp:** datetime  
**command-type:** string  
**target-user:** string  
**parameters:** string  
**data:** string  
**generated-date:** date  
**requested-by:** string  
**otp-code:** string  
**purpose:** string  
**expiry-time:** datetime  
**subject:** string  
**body:** string  
**sender:** string  
**time-range:** {start-time + end-time}  
**start-time:** time  
**end-time:** time

## Modular Division of Work:

		Missing Components (Need to be Added):	3) User login/logout tracking Failed authentication attempts Security event logging Session Management
<b>1) User Authentication</b>	1) OTP Handling System Email/SMS OTP verification Two-factor authentication Password reset via OTP Enhanced Validation		
<b>Designer:</b> K.Udayram			4) Token refresh mechanism Multi-device session handling Automatic logout on inactivity
<b>Tasks:</b>	2) Email verification during registration Phone number verification Document verification for doctors ,Audit Logging		

Implement authentication logic, including credential input, **OTP handling**, and **validation**.

**Manage session updates** and **audit logging**.

Integrate with the main system for authentication status and tokens.

## 2) Appointment Management and Admin Management

		B) Admin Management System (Completely Missing):
<b>Designer:</b> P .Pavan Kumar	1) User Management Dashboard View all patients and doctors User verification and approval Suspend/activate accounts User role management	
<b>Tasks:</b>		

Implement appointment scheduling, updates, and doctor search within appointments.

**Develop admin functionalities for user management, system monitoring, and activity logging.**

2) System Monitoring  
Real-time system health  
Appointment statistics  
User activity monitoring ,Performance metrics

3) Activity Logging  
System-wide activity logs  
User action tracking  
Error logging and monitoring ,Audit trail management

Manage interactions with Appointment Database and Activity Database.

### **3) Doctor Management and Patient Management**

**Designer:**C.Lohith Kumar Reddy

**Tasks:**

Develop doctor search functionality and appointment scheduling logic.

Implement patient profile updates and medical history management.

Ensure database interactions with Doctor Database and Patient Database.