# **People's Doctor – An effort to use technology to bring expert medical help to the needy at no cost.**

# Introduction

People's Doctor is a web application that serves as an exchange of philanthropic medical consulting given *free* by expert Doctors to people who are in need of it.

The system will register doctors, their specialities, consulting hours, locations and such in a schedule that will be published online. Multiple channels such as email notification, SMS alerts, facebook posts and messages on the website will be used to disburse information about a new schedule or change in a schedule (including cancellation).

Patients needing services can look up the services in an interactive manner based on a map and predefined search parameters such as city, location, speciality and so on. They can register to make an appointment, make or cancel appointments and update their profiles.

YouSee Administrators should be able to add and approve Doctors, Patients registering in the System and update their data. They should be able to approve/reject/change schedules and perform other administrative tasks.

# Use Cases

**Add Patient Register a new Patient into the System.**

Actor: Patient – Patients can register themselves.

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| All Details are correctly entered | Patient is registered successfully and an email is sent to the Administrator and the Patient with relevant details. |
| Email format is incorrect | Throw error message |
| Mobile has non numerics | Throw error message |
| First Name not entered | Throw error message |
| Last Name not entered | Throw error message |
| Phone number not entered | Throw error message |
| Captcha not correctly entered | Throw error message |

The form to add a patient should have similar look and feel as the donor/NGO registration page. Most of that code can be reused. Patient details must be entered in the Peoples\_Doctor database and a table called Patient in YouSee Database. This is to enable a single sign-on for Doctors and Patients into the system(Yousee and Peoples\_Doctor).

**Add Doctor Register a new Doctor into the system.**

**Actor:** Doctor – Doctors can register themselves.

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| All Details are correctly entered | Doctor is registered successfully and an email is sent to the Administrator and the Doctor with relevant details. |
| Email format is incorrect | Throw error message |
| Mobile has non numerics | Throw error message |
| Picture file is not a valid image file | Throw error message |
| First Name not entered | Throw error message |
| Last Name not entered | Throw error message |
| Phone number not entered | Throw error message |
| Captcha not correctly entered | Throw error message |

The form to add a patient should have similar look and feel as the donor/NGO registration page. Most of that code can be reused. Doctor details must be entered in the Peoples\_Doctor database and a table called Doctor in YouSee Database. This is to enable a single sign-on for Doctors and Patients into the system(Yousee and Peoples\_Doctor)

**Add Schedule Add a new Schedule into the system.**

**Actor: Doctor, Administrator** – Doctors or Administrator can make a schedule.

To make a schedule show a screen similar to the volunteering activity screen on [www.yousee.in](http://www.yousee.in/) and add the extra fields in the Schedule table.

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| All Details are correctly entered | Schedule is created successfully and an email is sent to the Administrator and the Doctor with relevant details. |
| From Time is greater than To Time | Throw an error message that From Time cannot be greater than To Time. |
| From Date is greater than To Date | Throw an error message that From Date cannot be greater than To Date. |
| Doctor chosen has a Schedule already at the same time in a different venue | Throw an error message that there is a conflicting schedule |
| Either or Both From and To Date are earlier than Current Date | Throw an error message that Schedule cannot start or end on a past date |

**Add Request**  **Add a new Request into the system.**

**Actor: Patient, Administrator** – Patient or Administrator can make a new Request.

To make a Request show a screen similar to the volunteering activity screen on [www.yousee.in](http://www.yousee.in/) and add the extra fields in the Schedule table.

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| All Details are correctly entered | Request is created successfully |
| From Time is greater than To Time | Throw an error message that From Time cannot be greater than To Time. |
| From Date is greater than To Date | Throw an error message that From Date cannot be greater than To Date. |
| Doctor chosen has a Schedule already at the same time in a different venue | Throw an error message that there is a conflicting schedule |

**Modify Request** To Understand about the Request Status changes please click (ctrl+click) on [Lifecycle of a Request](#_toc1192)

**Actor: Patient, Administrator, Doctor**

To make a Request show a screen similar to the volunteering activity screen on [www.yousee.in](http://www.yousee.in/) and add the extra fields in the Schedule table. In the scenarios 1,2,3,4 an email is sent to the Patient and the Administrator.

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| Request Status is changed from Pending to DeActivated by Patient, Administrator or Doctor | Change is accepted |
| Request Status is changed from Pending to Activated by Administrator, Doctor | Change is accepted |
| Request Status is changed from Activated to Complete by Administrator, Doctor | Change is accepted |
| Request Status is changed from Activated to DNA by Administrator, Doctor | Change is accepted |

**Edit Patient Details** Edit Patient data and modify it.

**Actor: Patient, Administrator**

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| All Details are correctly entered | Patient data is updated successfully and an email is sent to the Patient and Administrator on modified details |
| Email format is incorrect | Throw error message |
| Mobile has non numerics | Throw error message |
| First Name not entered | Throw error message |
| Last Name not entered | Throw error message |
| Phone number not entered | Throw error message |
| Captcha not correctly entered | Throw error message |

**Edit Doctor Details** Edit Doctor data and modify it.

**Actor:** Doctor, Administrator

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| All Details are correctly entered | Doctor Data is updated successfully and an email is sent to the Doctor and Administrator on modified details |
| Email format is incorrect | Throw error message |
| Mobile has non numerics | Throw error message |
| Picture file is not a valid image file | Throw error message |
| First Name not entered | Throw error message |
| Last Name not entered | Throw error message |
| Phone number not entered | Throw error message |
| Captcha not correctly entered | Throw error message |

**Edit Schedule Details**  Edit Schedule data and modify it.

**Actor: Doctor, Administrator** – Doctors or Administrator can make changes to a schedule.

|  |  |
| --- | --- |
| **Test Scenario** | **Outcome** |
| All Details are correctly entered | Schedule is modified successfully and an email is sent to all Patients who made a Request to be in this Schedule along with an email to the Doctor and to the Administrator. If Patients have any conflicting Schedules because of a date change their request is DeActivated and they are sent a separate email that states |
| From Time is greater than To Time | Throw an error message that From Time cannot be greater than To Time. |
| From Date is greater than To Date | Throw an error message that From Date cannot be greater than To Date. |
| Either or Both From and To Date are earlier than Current Date | Throw an error message that Schedule cannot start or end on a past date |
| Doctor chosen has a Schedule already at the same time in a different venue | Throw an error message that there is a conflicting schedule |
| Doctor chooses changes to the date such that some Patients have another Schedule at that date and time with another Doctor. | Cancel that Patient's request and send an email to them stating the reasons for cancellation. The email should also state they have a choice to cancel the other request and make this one if they wish to. |

# **Entities and Attributes**

**Doctor** (has a many-to-one relationship with Qualification Table)

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| Doctor\_id | Integer | Primary Key |
| First Name | Varchar (50) |  |
| Last Name | Varchar (50) |  |
| Preferred\_Email | Varchar (100) |  |
| Alternate\_Email | Varchar (100) |  |
| Mobile | Varchar(20) |  |
| Speciality | Varchar(50) |  |
| Gender | Char(1) |  |
| Address for Communication | Varchar(200) |  |
| City | Varchar(50) | Create an Index for this field |
| State | Varchar(50) |  |
| Country | Varchar(50) |  |
| Speciality\_SubSpeciality\_link\_id | Integer | Foreign Key to SubSpeciality |
| Current Hospital | Varchar(100) |  |
| Experience | Varchar(100) | Doctors need to give feedback on this column |
| Date\_of\_Birth | Date |  |
| Age | Number(3) |  |

**Qualification**

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| Qualification\_id | Integer | Primary Key |
| Doctor\_id | Integer | Foreign Key |
| Degree | Varchar (50) |  |
| Year | Integer |  |
| University | Varchar(20) |  |

**Speciality**

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| Speciality\_id | Integer | Primary Key |
| Speciality | Varchar (200) |  |

**SubSpeciality**

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| SubSpeciality\_id | Integer | Primary Key |
| SubSpeciality | Varchar (200) |  |

**Speciality\_SubSpeciality\_Link** (has a many-to-one relationship with Speciality and SubSpeciality Tables)

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| SubSpeciality\_Link\_id | Integer | Primary Key |
| Speciality\_id | Integer | Foreign Key to Speciality |
| SubSpeciality | Integer | Foreign Key to SubSpeciality |

**Patient**

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| Patient\_id | Integer | Primary Key |
| First Name | Varchar (50) |  |
| Last Name | Varchar (50) |  |
| Email | Varchar (100) |  |
| Mobile | Varchar(20) |  |
| Gender | Char(1) |  |
| Age | Number(3) |  |
| Date\_of\_Birth | Date |  |
| Address | Varchar(200) |  |
| Parent/Guardian | Varchar(100) |  |

**Schedule** (has a many-to-one relationship with Doctor and Location)

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| Schedule\_id | Integer | Primary Key |
| From\_Date | Date |  |
| To\_Date | Date |  |
| From\_Time | Time |  |
| To\_Time | Time |  |
| Location\_id | Integer | Foreign Key to Location |
| Doctor\_id | Integer | Foreign Key to Doctor |
| Description | Varchar(100) |  |

**Patient Request** (has a many-to-one relationship with Patient and Schedule Table)

| **Attribute Name** | **Datatype and Length** | **Notes** |
| --- | --- | --- |
| Request\_id | Integer | Primary Key |
| Patient\_id | Integer | Foreign Key to Patient |
| Schedule\_id | Integer | Foreign Key to Schedule |
| Problem\_History | Varchar(500) |  |
| Actual\_Date\_of\_Consultation | Date |  |
| Time\_of\_Consultation | Time |  |
| Status\_type | Character(10) | Is Pending, Activated or DeActivated or Complete or DNA (Did not Attend) |
| Status\_Date | Datetime | Date on which the status of a request changed.. |

**City**

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| city\_id | Number | Primary Key |
| Lat | Number |  |
| Long | Number |  |
| City | Varchar(50) | Create a Unique Index for this field |
|  |  |  |

**Location** (has a many-to-one relationship with City Table)

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| Location\_id | Number | Primary Key |
| Lat | Number |  |
| Long | Number |  |
| City\_id | Number | Foreign Key to City |
| Location | Varchar(50) |  |

**Request\_Status\_Change**

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Datatype and Length** | **Notes** |
| Status\_Change\_id | Number | Primary Key |
| Status\_from | Varchar(20) |  |
| Status\_to | VarChar(20) |  |
| Actor | Varchar(20) | Can be one of Doctor, Patient, Administrator |

# Lifecycle of a Request.

A Request has 5 Status' – Pending, Activated, DeActivated, Complete and DNA (Did not Arrive).

**Pending** When a Request is first Created it is given this Status

**Activated** When a Request has been Activated by the Administrator it is given this Status

**DeActivated** When a Request has been DeActivated before the Schedule (by the Administrator or the Patient) it is given this Status

**Complete** When the Patient has attended the Clinic (Schedule) the Request is considered Satisfied and closed

**DNA** When the Patient has NOT attended the Clinic (Schedule) the Request is considered DNA and closed

DNA – Did not Attend

|  |  |  |  |
| --- | --- | --- | --- |
| **Actor** | **Use Case** | **Status Transition** | |
| **Status From** | **Status To** |
| Patient | Add a Request | None | Pending |
| Administrator, Doctor | Approve a Request | Pending | Activated |
| Administrator, Doctor, Patient | Modify a Request | Pending | DeActivated |
| Patient | Modify a Request | Activated | DeActivated |
| Administrator, Doctor | Complete a Request | Activated | Complete |
| Administrator, Doctor | Complete a Request | Activated | DNA |