



# Hospital Management System

## Business Requirements Document

### V1.0

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## Table of Contents

|            |   |           |
|------------|---|-----------|
| <b>1.0</b> | <b>Introduction</b>                     | <b>3</b>  |
| 1.1        | Purpose of this document                | 3         |
| 1.2        | Project Overview                        | 3         |
| 1.2.1      | Objectives                              | 3         |
| 1.3        | Intended Audience                       | 4         |
| <b>2.0</b> | <b>Process Architecture</b>             | <b>4</b>  |
| <b>3.0</b> | <b>High Level Business Requirements</b> | <b>5</b>  |
| <b>4.0</b> | <b>Detailed Business Requirements</b>   | <b>6</b>  |
| 4.1        | Functional Requirements                 | 6         |
| <b>5.0</b> | <b>References</b>                       | <b>10</b> |
| 5.1        | Table 1.0(Admin)                        | 10        |
| 5.2        | Table 2.0(Patient)                      | 10        |
| 5.3        | Table 3.0(Physician)                    | 10        |
| 5.4        | Table 4.0(Diagnosis Details)            | 11        |
| <b>6.0</b> | <b>Terms &amp; Conditions</b>           | <b>12</b> |
| <b>7.0</b> | <b>Change Log</b>                       | <b>13</b> |



# 1.0 Introduction

## 1.1 Purpose of this document

This document is aimed at:

- Providing the necessary inputs to the detailed requirements gathering phase and further on for the SDLC processes.
- This document also serves to establish the traceability between the Business Objectives and the requirements identified in the proposed solution and how they satisfy the stated objectives.
- Provide expectation traceability in terms of the requirements and the user expectation
- Serves as a formal template for documenting the Business Requirements which also includes statutory and regulatory requirements.

The purpose of this document is to systematically capture requirements for the project and the system to be developed. Functional requirements are captured in this document. It also serves as the input for the project scoping.

## 1.2 Project Overview

### 1.2.1 Objectives

Below are the objectives that shall be fulfilled post the execution of this project:

Hospital Management system is a system used for enabling enrollment of patient, add physician, search for physician, update diagnosis details and view Patient history.

- Enroll Patient – Hospital Administrators to register a Patient into the system. The administrator should have the details of the patient to be entered into the system.
- Add Physician - Hospital Administrators to save the Physician details into the system.
- Physician Search - Hospital Administrators to search for Physician based on specified search criteria
- Patient Diagnosis Details - by Hospital Administrators to save the patients diagnosis details into the system.
- View Patient History - Administrator wishes to view the patient case history details

## 1.3 Intended Audience

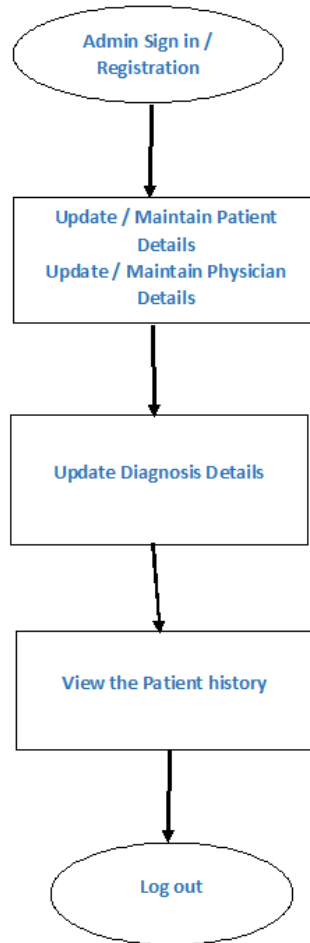
- All member of the project.
- Delivery Assurance Group.

## 2.0 Process Architecture

Below is the overall functional flow of the project including the components of interaction

- Create Admin Registration page & Authentication.
- Get and manage Patient details.
- Get and manage Physician details.
- Physician search.
- Patient diagnostic details.
- View Patient history.
- Disconnect on log off.





## 3.0 High Level Business Requirements

Note - Primary focus is to complete developing the critical requirements (highlighted in Yellow) and then to proceed with the remaining requirements.

| S.No. | Business Requirement ID | Short Description        | Description in detail  | Interacting Business Processes |
|-------|-------------------------|--------------------------|--|--------------------------------|
| 1     | Req_1                   | Admin Registration       | Ability of the system to procure the fundamental details of the Admin              |                                |
| 2     | Req_2                   | Admin Authentication     | Ability of the system to authenticate the credentials of the registered Admin      |                                |
| 3     | Req_3                   | Create Patient records   | Ability of the system to authenticate the credentials of the registered Admin      |                                |
| 4     | Req_4                   | Create Physician Records | Ability of the system to create Contract. Update Terms and conditions of contract. |                                |

|   |       |                           |  |  |
|---|-------|---------------------------|--|--|
| 5 | Req_5 | Search Physician          | Ability of the system to set amenities for the created contract. |  |
| 6 | Req_6 | Patient Diagnosis Details | Ability of the system to update the Patient Diagnosis details    |  |
| 7 | Req_7 | View Patient History      | Ability of the system to view Patient History                    |  |
| 8 | Req_8 | Admin logoff              | Ability of the system to enable Admin to logoff                  |  |

## 4.0 Detailed Business Requirements

### 4.1 Functional Requirements

The Requirements in this document are prioritized as follows:

| Value | Rating   | Description  |
|-------|----------|--|
| 1     | Critical | This requirement is critical to the success of the project. The project will not be possible without this requirement. |
| 2     | High     | This requirement is high priority, but the project can be implemented at a bare minimum without this requirement.      |
| 3     | Medium   | This requirement is somewhat important, as it provides some value but the project can proceed without it.              |
| 4     | Low      | This is a low priority requirement, or a "nice to have" feature, if time and cost allow it.                            |
| 5     | Future   | This requirement is out of scope for this project, and has been included here for a possible future release.           |

| Req. #  | Rationale Categorization | Business Requirement   | Req. Type * | Priority ** | Originator *** | BR Traced to Business Requirement / Use case ID | Impacted Stakeholders                      |
|---------|--------------------------|--|-------------|-------------|----------------|---|--|
| Req_1.1 | Admin Registration       | When the Admin clicks on the registration link, it should re-direct to registration form.  | UI          | Critical    | NA             | Req_1   |  |
| Req_1.2 | Admin Registration       | Admin needs to fill some of the basic attributes/fields as mentioned below in requirement: First Name, Last Name, Age, Gender, Contact Number, Vendor Id, Password | UI          | Critical    | NA             | Req_1   | Please refer to Table 1.0 under References |
| Req_1.3 | Admin Registration       | Clicking 'Submit' should validate the datatype constraints for each field  | F           | Critical    | NA             | Req_1   |  |

| Req. #  | Rationale Categorization  | Business Requirement   | Req. Type * | Priority ** | Originator *** | BR Traced to Business Requirement / Use case ID | Impacted Stakeholders                      |
|---------|---------------------------|--|-------------|-------------|----------------|---|--|
| Req_1.4 | Admin Registration        | Admin failing to provide information on the mandatory fields be provided with an alert message – ‘Please update the highlighted mandatory field(s).’ Also, highlight the missed out field in red | E           | Medium      | NA             | Req_1   |  |
| Req_1.5 | Admin Registration        | Post-successful field level validation, save the information in the database   | F           | Critical    | NA             | Req_1   |  |
| Req_1.6 | Admin Registration        | Upon saving the information in the database, display the message ‘Your details are submitted successfully’.  | E           | Medium      | NA             | Req_1   |  |
| Req_2.1 | Credential Authentication | A registered user – is able click ‘Login’ link, after keying in ‘Admin ID’ & ‘Password’ field and get his credentials authenticated with the existing database entry.                            | F           | Critical    | NA             | Req_2   |  |
| Req_3.1 | Create Patient records    | On clicking “Create Patient Record”, it should redirect Admin to the Patient Record Creation Page  | UI          | Critical    | NA             | Req_3   |  |
| Req_3.2 | Create Patient records    | Admin should be able to update the mandatory fields of the Patient   | F           | Critical    | NA             | Req_3   | Please refer to Table 2.0 under References |
| Req_3.3 | Create Patient records    | Clicking ‘Submit’ should validate the datatype constraints for each field  |             |             |                | Req_3   |  |
| Req_3.4 | Create Patient records    | Admin failing to provide information on the mandatory fields be provided with an alert message – ‘Please update the highlighted mandatory field(s).’ Also, highlight the missed out field in red | F           | Critical    | NA             | Req_3   |  |

| Req. #  | Rationale Categorization | Business Requirement   | Req. Type * | Priority ** | Originator *** | BR Traced to Business Requirement / Use case ID | Impacted Stakeholders                      |
|---------|--------------------------|--|-------------|-------------|----------------|---|--|
| Req_3.5 | Create Patient records   | Post-successful field level validation, save the information in the database   | F           | Critical    | NA             | Req_3   |  |
| Req_3.6 | Create Patient records   | Upon saving the information in the database, display the message 'Your details are submitted successfully'.  | F           | Critical    | NA             | Req_3   |  |
| Req_4.1 | Create Physician Records | On clicking "Create Patient Record", it should redirect Admin to the Physician Record Creation Page  | UI          | Critical    | NA             | Req_4   |  |
| Req_4.2 | Create Physician Records | Admin should be able to update the mandatory fields of the Physician   | F           | Critical    | NA             | Req_4   | Please refer to Table 3.0 under References |
| Req_4.3 | Create Physician Records | Clicking 'Submit' should validate the datatype constraints for each field  | F           | Critical    | NA             | Req_4   |  |
| Req_4.4 | Create Physician Records | Admin failing to provide information on the mandatory fields be provided with an alert message – 'Please update the highlighted mandatory field(s).' Also, highlight the missed out field in red | F           | Critical    | NA             | Req_4   |  |
| Req_4.5 | Create Physician Records | Post-successful field level validation, save the information in the database   | F           | Critical    | NA             | Req_4   |  |
| Req_4.6 | Create Physician Records | Upon saving the information in the database, display the message 'Your details are submitted successfully'.  | F           | Critical    | NA             | Req_4   |  |
| Req_5.1 | Search Physician         | When Admin clicks the link "Search Physician", it should display all the Physicians present in the Database  | F           | Critical    | NA             | Req_5   |  |



| Req. #  | Rationale Categorization  | Business Requirement   | Req. Type * | Priority ** | Originator *** | BR Traced to Business Requirement / Use case ID | Impacted Stakeholders |
|---------|---------------------------|--|-------------|-------------|----------------|---|-----------------------|
| Req_5.2 | Search Physician          | When Admin clicks the link "Search Physician", and with specific search criteria, then it should display the list of Physicians satisfying the search criteria.                                  | F           | Critical    | NA             | Req_5   |                       |
| Req_6.1 | Patient Diagnosis Details | When Admin clicks "Add Patient Diagnosis Details" link, Admin should be redirected to creation page  | F           | Critical    | NA             | Req_6   |                       |
| Req_6.2 | Patient Diagnosis Details | Admin should be able to update the mandatory fields of the Physician   | F           | Critical    | NA             | Req_6   |                       |
| Req_6.3 | Patient Diagnosis Details | Clicking 'Submit' should validate the datatype constraints for each field  | F           | Critical    | NA             | Req_6   |                       |
| Req_6.4 | Patient Diagnosis Details | Admin failing to provide information on the mandatory fields be provided with an alert message – 'Please update the highlighted mandatory field(s).' Also, highlight the missed out field in red | F           | Critical    | NA             | Req_6   |                       |
| Req_6.5 | Patient Diagnosis Details | Post-successful field level validation, save the information in the database   | F           | Critical    | NA             | Req_6   |                       |
| Req_6.6 | Patient Diagnosis Details | Upon saving the information in the database, display the message 'Your details are submitted successfully'.  | F           | Critical    | NA             | Req_6   |                       |
| Req_7.1 | View Patient History      | When Admin clicks "View Patient History" link, the system should list all the available patient ID and patient name  | UI          | Critical    | NA             | Req_7   |                       |
| Req_7.2 | View Patient History      | On clicking the Patient ID, it should display the Patient History  | UI          | Critical    | NA             | Req_7   |                       |
| Req_8.1 | Admin Log off             | Option to log off from the system.   | UI          | Critical    | NA             | Req_8   |                       |

## 5.0 References

### 5.1 Table 1.0(Admin)

| Field Name         | Field Type | Data Type    | Mandatory | Possible Values  |
|--------------------|------------|--------------|-----------|------------------|
| Admin ID           | Text(10)   | Alphabetic   | Yes       | System Generated |
| First Name         | Text(50)   | Alphabetic   | Yes       |                  |
| Last Name          | Text(50)   | Alphabetic   | Yes       |                  |
| Age                | Numeric(2) | Numeric      | Yes       |                  |
| Gender             | Drop Down  | NA           |           | Male, Female     |
| DoB                | Text(10)   | Alphanumeric | Yes       |                  |
| Contact Number     | Text(10)   | Numeric      | Yes       |                  |
| Alt Contact Number | Text(10)   | Numeric      | No        |                  |
| Email ID           | Text(50)   | Alphanumeric | Yes       |                  |

### 5.2 Table 2.0(Patient)

| Field Name         | Field Type | Data Type    | Mandatory | Possible Values  |
|--------------------|------------|--------------|-----------|------------------|
| Patient ID         | Text(10)   | Alphanumeric | Yes       | System Generated |
| First Name         | Text(50)   | Alphabetic   | Yes       |                  |
| Last Name          | Text(50)   | Alphabetic   | Yes       |                  |
| Age                | Numeric(2) | Numeric      | Yes       |                  |
| Gender             | Drop Down  | NA           |           | Male, Female     |
| DoB                | Text(10)   | Alphanumeric | Yes       |                  |
| Contact Number     | Text(10)   | Numeric      | Yes       |                  |
| Alt Contact Number | Text(10)   | Numeric      | No        |                  |
| Email ID           | Text(50)   | Alphanumeric | Yes       |                  |
| Password           | Text(15)   | Alphanumeric | Yes       |                  |
| Address Line 1     | Text(100)  | Alphanumeric | Yes       |                  |
| Address Line 1     | Text(100)  | Alphabetic   | Yes       |                  |
| City               | Text(50)   | Alphabetic   | Yes       |                  |
| State              | Text(50)   | Alphabetic   | Yes       |                  |
| Zip Code           | Text(10)   | Numeric      | Yes       |                  |

### 5.3 Table 3.0(Physician)

| Field Name | Field Type | Data Type | Mandatory | Possible Values |
|------------|------------|-----------|-----------|-----------------|
|------------|------------|-----------|-----------|-----------------|

|                      |            |              |     |                  |
|----------------------|------------|--------------|-----|------------------|
| Physician ID         | Text(10)   | Alphanumeric | Yes | System Generated |
| First Name           | Text(50)   | Alphabetic   | Yes |                  |
| Last Name            | Text(50)   | Alphabetic   | Yes |                  |
| Age                  | Numeric(2) | Numeric      | Yes |                  |
| Gender               | Drop Down  | NA           |     | Male, Female     |
| DoB                  | Text(10)   | Alphanumeric | No  |                  |
| Contact Number       | Text(10)   | Numeric      | Yes |                  |
| Alt Contact Number   | Text(10)   | Numeric      | No  |                  |
| Email ID             | Text(50)   | Alphanumeric | Yes |                  |
| Password             | Text(15)   | Alphanumeric | Yes |                  |
| Address Line 1       | Text(100)  | Alphanumeric | Yes |                  |
| Address Line 2       | Text(100)  | Alphabetic   | No  |                  |
| City                 | Text(50)   | Alphabetic   | Yes |                  |
| State                | Text(50)   | Alphabetic   | Yes |                  |
| Zip Code             | Text(10)   | Numeric      | Yes |                  |
| Degree               | Text(50)   | Alphabetic   | Yes |                  |
| Specialty            | Text(50)   | Alphabetic   | Yes |                  |
| Work hours           | Drop down  | NA           | Yes |                  |
| Hospital/Clinic Name | Text(100)  | Alphanumeric | Yes |                  |

## 5.4 Table 4.0(Diagnosis Details)

| Field Name            | Field Type  | Data Type    | Mandatory | Possible Values  |
|-----------------------|-------------|--------------|-----------|------------------|
| Report ID             | Numeric(10) | Numeric      | Yes       | System Generated |
| Patient ID            | Text(10)    | Alphanumeric | Yes       | System Generated |
| Physician ID          | Text(10)    | Alphanumeric | Yes       | System Generated |
| Service date          | Text(10)    | Alphanumeric | Yes       |                  |
| Test Result date      | Text(10)    | Alphanumeric | Yes       |                  |
| Diag 1 – Actual Value | Numeric(10) | Numeric      | Yes       |                  |
| Diag 1 – Normal Range | Numeric(10) | Numeric      | Yes       |                  |
| Diag 2 – Actual Value | Numeric(10) | Numeric      | No        |                  |
| Diag 2 – Normal Range | Numeric(10) | Numeric      | No        |                  |

|                       |             |            |     |  |
|-----------------------|-------------|------------|-----|--|
| Diag 3 – Actual Value | Numeric(10) | Numeric    | No  |  |
| Diag 3 – Normal Range | Numeric(10) | Numeric    | No  |  |
| Diag 4 – Actual Value | Numeric(10) | Numeric    | No  |  |
| Diag 4 – Normal Range | Numeric(10) | Numeric    | No  |  |
| Diag 5 – Actual Value | Numeric(10) | Numeric    | No  |  |
| Diag 5 – Normal Range | Numeric(10) | Numeric    | No  |  |
| Diag 6 – Actual Value | Numeric(10) | Numeric    | No  |  |
| Diag 6 – Normal Range | Numeric(10) | Numeric    | No  |  |
| Physician Comments    | Text(300)   | Alphabetic | Yes |  |
| Other info            | Text(300)   | Alphabetic | No  |  |

## 6.0 Terms & Conditions

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## 7.0 Change Log

| Version Number | Changes Made   |            |                |                  |
|----------------|--|------------|----------------|------------------|
| V1.0.0         | Initial baseline created on 6/02/2019 by Manonmani Guruswamy   |            |                |                  |
| Vx.y.z         | <Please refer the configuration control tool / change item status form if the details of changes are maintained separately. If not, the template given below needs to be followed> |            |                |                  |
|                | Section No.  | Changed By | Effective Date | Changes Effected |
|                |  |            |                |                  |

