Gambi General Teaching Hospital

Software Requirements Specification

For

Gambi Hospital Information Management System(HIMS)

Prepared by

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**Specific Requirements**

This chapter describes in detail all requirements of the system that the system is to fulfill to be submitted those are user and system requirements

**3.1 User Requirements**

User requirements as functional and non functional and we describe them in detail

**3.1.1. Functional User Requirements**

We again group the functional requirement as Requirements that change Memory contents , Network using Requirements, Authentication Requirements, viewing requirements, Memory manipulation requirements

**3.1.1.1 Requirements that change Memory contents**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| REQID | REQ | Description | priority | source | Related Requirement |
| **REQ-01** | The System Shall be able to allow the Receptionist to add Patients to the active patient list | To regester the patients the receptionist enters must enters the patients information | High | What I know |  |
|  | The system shall be able to register patients |  |  |  |  |
|  | The shall allow be able to allow the doctor to add information to the patients information when the patient is active |  |  |  |  |

**3.1.1.2Network using Requirements**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| REQID | REQ | Description | priority | source | Related Requirement |
| **REQ-06** | The System Shall be able to allow the receptionist to send active Patients to the doctors | Send patient to the doctor those registered patients for treatment | high | receptionist | REQ-01 |
| **REQ-07** | The System Shall allow the admin to view all list of active patients today | The system allows the admin to see list of patients that are treated today | high | Head Adminstrater |  |
| **REQ-08** | The system shall allow the doctor to send laboratory request paper to the laboratorist | The doctor will must be able to send laboratory request paper to the laboratories through the network | high | Labratorist |  |
| **REQ-09** | The system shall allow the labratorist to send laboratory result to the appropriate doctor | After the laboratories finishes the laboratory result of the patient the laboratories shall be able to send the result to the requested doctor | high | Labratorist | **REQ-09** |
|  | The system shall allow the doctor to send X-ray requisite to the radiographer |  |  |  |  |
|  | The system shall allow the radiographer to send X-ray results to the doctor |  |  |  |  |
|  | The system shall allow the doctor to send drag lists given to the patient to the pharmacist |  |  |  |  |
|  | The system shall able to allow the doctor ultrasound request to the radiographer |  |  |  |  |
|  | The system shall able to allow the radiographer ultrasound result to the doctor |  |  |  |  |

**3.1.1.2 Authentication Requirements**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| REQID | REQ | Description | priority | Source | Related Requirement |
| **REQ-11** | The system shall be able to allow the administrator to login to his home page | The system shall be able to log in to his home page by using his user name and password | high | Head administrator |  |
| **REQ-12** | The system shall be able to logout the administrator | The Receptionist can be able to close the system when it finishes work | high | Head administrator | **REQ-12** |
| **REQ-13** | The system shall be able to login the laboratories | The system shall be able to log in to his home page by using his user name and password | high | What I know |  |
| **REQ-14** | The system shall be able to logout the laboratories | The Receptionist can be able to close the system when it finishes work | high | What I know | **REQ-14** |
| **REQ-17** | The system shall be able to login the Receptionist | The system shall be able to log in to his home page by using his user name and password | high | What I know |  |
| **REQ-18** | The system shall be able to logout the Receptionist | The Receptionist can be able to close the system when it finishes work | high | What I know | **REQ-18** |
| **REQ-29** | The system shall be allow the administrator to register new employees | Since the password for the users of the system is given by the administrator so the administrator will be able to change password of the users | high | Head administrator |  |
|  | The system shall be able to allow the admin to give primary password to the employees |  |  |  |  |
| **REQ-20** | The system shall be able to allow the administrator to change his password | Since the password for the users of the system is given by the administrator so the administrator will be able to change user name of the users | high | Head administrator |  |
|  | The system shall be able to allow the receptionist change his password |  |  |  |  |
|  | The system shall be able to allow the doctor to change his password |  |  |  |  |
|  | The system shall be able to allow the radiographer to change his password |  |  |  |  |
|  | The system shall be able to allow the Doctor to change his password |  |  |  |  |
| **REQ-22** | The system shall be able to login the doctor | The Receptionist can be able to close the system when it finishes work | high | What I know | **REQ-22** |
|  | The system shall be able to Logout the doctor |  |  |  |  |
|  | The system shall be able to login the nurses |  |  |  |  |
|  | The system shall be able to Logout the nurses |  |  |  |  |
|  | The system shall be able to login the -radiographer |  |  |  |  |
|  | The system shall be able to logout the -radiographer |  |  |  |  |

**3.1.1.3 viewing requirements**

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| --- | --- | --- | --- | --- | --- |
| REQID | REQ | Description | priority | source | Related Requirement |
| **REQ-23** | The System Shall be able to allow the Receptionist to see some/all the active Patients list | The Receptionist can able to view some specified list of patient | high | Receptionist |  |
| **REQ-24** | The System Shall be able to allow the administrator to see some or all the Patients list | The administrator can able to view some patient list | high | administrator |  |
| **REQ-25** | The System Shall be able to allow the administrator to see list of Patients that treated in follow-up treatment | The administrator the list of patients that treated in follow up by sleeting follow up patients button | high | Administrator |  |
| **REQ-26** | The System Shall be able to allow the administrator to see list of Patients that can be admitted | The administrator can see those admitted patients by clicking the admitted button | high | Administrator |  |

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| --- | --- | --- | --- | --- | --- | --- |
| **REQ-27** | | The system shall be able to allow the administrator to see list of patients that need surgery | The patients that needs surgery will be displayed for the administrator to be reserve a surgery day ,room | high | Administrator |  |
| **REQ-28** | | The system shall allow the receptionist to see cheek up date | The receptionist can see the cheek up date of those patients that need follow up treatment | High | receptionist |  |
| **REQ-29** | The system shall be able to allow the administrator to see patients cheek up day | The cheek up date for those patients that needs cheek up will be displayed to the administrator | High | administrator |  |
| **REQ-30** | The system shall be able to allow the administrator to see all patients treated by specific doctor | The system displays to the administrator treated by specific doctor | Medium | administrator |  |
| **REQ-31** | The system shall be able to allow the administrator to see all list of patients according to their disease type | List of patients will be categorized to their disease type will be displayed to the administrator | Low | administrator |  |
| **REQ-32** | The system shall allow the administrator to see all patient list that are active today | The administrator will be able to see all list of all patients that can be treated today | Medium | administrator |  |

**3.1.1.4Memory manipulation requirements**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| REQID | REQ | Description | Priority | source | Related requirement |
| **REQ-33** | The System Shall be able to allow the Receptionist to search patients information by their ID | After assessing the homepage The Receptionist can able to search specific patients | high | Receptionist | **REQ-01** |
| **REQ-35** | The system shall be able to identify the patient is registered with out payment | If the patient is registered for last time before 15 days the patient doesn’t pay for registration so thee system will identify the patients that can be registered with out payment | high | receptionist |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **REQ-37** | The System Shall be able to allow the administrator to search patients information by their ID | After assessing the homepage The Receptionist can able to search specific patients | high | receptionist |  |
| **REQ-38** | The System Shall be able to allow the doctor to search patients information by their ID | The system allow the doctor to search patients  From the patients treated by him by their name | high | Doctor | **REQ-01** |

**3.1.2.NonFunctional Requirements**

NFPR -1**.The system shall enable the receptionist to search Patients information within 2 seconds.**

**Description:** when the **receptionist** searches any information in the system he/she clicks the search button and the system responds with in 2 seconds

Priority - high

**Pre-condition**: the **receptionist** must login to the system and the **receptionist** want to access the information from the system.

**Post-condition**: the **receptionist** accesses the information they want.

NFPR -2.The system shall able to use textual information.

**Description**: the necessary services that are given by the system is in the form of words ‘text’.

**Priority medium**

**Pre-condition:** the authorized users or the users which are authorized to update and change database always use texts to update the information.

**Post-condition:** the users get any information from the system is in text format.

NFPR -3**.The system shall enable the statistics expert to search Patients information within 2 seconds.**

**Description:** the system enables the **statistics expert to search Patients information by clicking search button**

**Pre-condition**: the **statistics expert** must login to the system and the **statistics expert** want to access the information from the system.

**Post-condition**: the **statistics expert** accesses the information the patient.

NFPR -4**.The system shall enable the receptionist to update Patients information within 30 seconds.**

**Description**: the Receptionist changes patientes information when available from the database.

**Priority high**

**Pre-condition:** the **Patients** information needs to change and the patient must first registered .

**Post-condition**: the database information is updated inappropriate time.

NFPR -5**.The system shall enable the statistics expert to update Patients information within 30 seconds.**

**Description**: the Receptionist changes **Patients** information when available from the database.

**Priority high**

**Pre-condition:** the **Patients** information needs to change and the patient must first registered ..

**Post-condition**: the database information is updated inappropriate time.

NFPR -6.The system shall be binary compatible between Windows, and Linux operating systems.

NFCR-7.The system shall be accessible from any computer with Internet connectivity and at least one of the following web browsers: Microsoft Internet Explorer, Google Chrome, and Mozilla Firefox

**3.4.2 Maintainability requirement.**

NFMR-8.The system shall be easily maintainable by any person who has the skill to maintain software system. Also, other programmers shall be capable of easily modifying and updating code by using the documentation provided with the system.

**3.4.3 Portability requirement**

NFPR-9.The system shall be portable to any device .

**3.4.4 Reusability requirement**

NFRR-10.The system shall be well-documented in order for new administrators to change content.

NFRR-11.The system shall be designed in such a way that administrators may modify content without having to modify code.

**3.4.5 Resource Utilization requirement**

NFRUR-12.The system shall be accessible from any type of computer with an active Internet connection.

NFRUR-13.The system shall require an active server with adequate hard drive space and available memory.

**3.4.6 Serviceability requirement**

NFSR-14.The system shall be easily modified by referencing the documentation that shall be provided.

**3.4.7 Reliability requirement**

NFRLR-14.The system shall be accessible at any time, with the exception of technology infrastructure failure.

NFRLR-16.the system shall not fail more than ones in a year



Use case description for Search Patients information

|  |  |  |
| --- | --- | --- |
| Name | Send patient list to doctor | |
| Actors | Receptionist | |
| Goals | to send patients information to the doctor | |
| Pre condition | The patient must first registered | |
| Summary |  | |
| Related use case |  | |
| Steps | User Action | System Response |
| 1,The user log in to his home page  2,the user clicks the search tab  4,the user enters the patients Name , ID  5,the user clicks enter key  9,if not found message in step 8 is displayed then go back to  Step- 4  10-use case ends | 3,the system opens the search dialog box  6,the system searches the patients information from the data base  7,if found the system displays the patients information  8,else the system displays not found message |
| Post condition | The searched patients information will be displayed | |

Use case description for Send patient list to doctor

|  |  |  |
| --- | --- | --- |
| Name | Search Patients information | |
| Actors | Receptionist, statistics expert | |
| Goals | To search Specific patients information | |
| Pre condition | The user must first log in to the system | |
| Summary |  | |
| Related use case |  | |
| Steps | User Action | System Response |
| 1,The Receptionist selects the patients list and the intended doctor  2,the Receptionist clicks enter  6,if step-5 occurs go back to step -2  7,use case ends | 3,the system sends the patients information to the Intended doctor  4,if the message is successes fully sent the system displays successes fully sent message  5,if the system failed to send the message across the network the system displays failed to send message |
| Post condition | The Patients information is send to the doctor | |

Use case description for update Patients information

|  |  |  |
| --- | --- | --- |
| Name | update Patients information | |
| Actors | Receptionist, statistics expert | |
| Goals | To update Patients information | |
| Pre condition | The patients information will be updated | |
| Summary |  | |
| Related use case |  | |
| Steps | User Action | System Response |
| 1,The Receptionist, statistics expert selects the patient that is going to update  2,the Receptionist, the statistics expert clicks the update button  4,the Receptionist, statistics expert enters the new data of the system  5,the Receptionist, statistics expert clicks the GO button  7,the user confirms  9,if step-8 occurs go back to step -2  10,use case ends | 3,the system displays new dialog box to enter the new patients information  6,the system displays warning message (are you sure do you want to update patients information)    6,if the system successfully updates the patients information the system displays successes fully updated message  8,if failed to up date the system displays failed to update information |
| Post condition | The Patients information is successes fully updated | |

Use case description Register Patients information

|  |  |  |
| --- | --- | --- |
| Name | Register Patients information | |
| Actors | Receptionist | |
| Goals | To Register new Patients | |
| Pre condition | The Receptionist must be first registered | |
| Summary |  | |
| Related use case |  | |
| Steps | User Action | System Response |
| 1,The Receptionist enters ti his home page  2,the clicks the registered tab  4,the Receptionist enters the Patients information  5,the Receptionist clicks GO Button  9,if step-8 occurs go back to step -4  10,use case ends | 3,the system opens the register window  6,the system cheeks the validity of the patients information  7, if the patients information is correct the system displays successes fully registered message  8,if the patients information is not valid the system displays invalid message  6,the system displays warning message (are you sure do you want to update patients information) |
| Post condition | The Patients information is successes fully registered | |

Use case description send laboratory request

|  |  |  |
| --- | --- | --- |
| Name | send laboratory request | |
| Actors | Doctor | |
| Goals | To send laboratory request to the laboratory | |
| Pre condition | The patients must be first registered and sent to the doctor | |
| Summary |  | |
| Related use case |  | |
| Steps | User Action | System Response |
| 1,the doctor enters to his home page  2,The Doctor selects the patients wishes to send to the libratory  3,the doctor fills the laboratory request form  4,the Doctor selects the laboratory  5,the Doctor presses send button  4,the Receptionist enters the Patients information  5,the Receptionist clicks GO Button  9,if step – 8 occurs go back to step-3  10 , use case ends | 6,the system sends the patients laboratory request  7,the system displays successfully sent message  8,the system displays failed to send message |
| Post condition | The Patients is successes fully registered sent to the libratory | |