1. **Introduction**

**1.1Purpose**

This document is to describe all the software requirement specification (SRS) for the Clinic-O-Sight (COS). The system aims to help the patients to take appointment online through internet and track their records through it.Polyclinic has been facing problems due to its paper-based appointment system. With the increase in the number of patients visiting, it has become difficult to manage the appointment system manually.The purpose of this project is to solve these complications by creating custom-built database software to manage the appointment system. For the receptionist it makes easy to set date and time for the treatment of the patient to the relevant doctor.Doctor enters medical prescription and receptionist takes the print.It also helps to maintain doctor’s consultation fee, Laboratories and Testing charges automatically. And maintaining the employee salary and its expenses.

**1.2 Document Conventions**

When writing this document it was inherited that all requirements have the different priority levels. The levels of authentication are provided in four different aspects i.e. The Admin, the Receptionist, The Doctors and The Patients.

**1.3 Intended Users and Reading Suggestions**

* **Developers:**in order to be sure they are developing the right project that fulfills requirements provided in this document.
* **Testers:**in order to have an exact list of the features and functions that has to respond according to requirements and provided diagrams.
* **Users:**in order to get familiar with the idea of the project and suggest other features that would make it even more functional.
* **Documentation writers:**to know what features and in what way they have to explain. What security technologies are required, how the system will response in each user’s action etc.
* **Admin, Receptionist, Doctors and patients:** in order to know exactly what they have to expect from the system, right inputs and outputs and response in error situations.

**1.4 Project Scope**

The system has been facing problems due to its paper-based appointment system. With the increase in the number of patients visiting, it has become difficult to manage the appointment system manually. Recording of appointments and creating registers by pen and paper has become a tedious task. And also its difficult to manage huge number of patient database.

The COS web-application gives solution to the polyclinic patients and employees. This system which manages complete polyclinic details in a single application and in a single database.The users will use this system to handle all the functionalities easily. Doctors will also use the system to keep track of the patients consulting to them.The intentions of the system are to reduce over-time pay and increase the number of patients that can be treated accurately.Requirements statements in this document are both functional and non-functional.

**1.3 References**

Books               : An Integrated Approach Software Engineering 3rd Edition by PankajJalote.

Website : [http://www.W3shools.com/php/](http://www.w3shools.com/php/)

<http://in.php.net/>

**2. Overall Description**

**2.1 Product Perspective**

Product perspective is essentially the relationship of the product to the other products, defining if the product is independent or is part of a larger product (dependent), and what the principal interfaces of the product are.

This software is totally independent system that manages activities of the COS as taking appointments, generating patient reports, personnel management and administrative issues.

In this project all the records are stored in single database. Different users have different permission to access this web application. Each user has unique id. If any data is lost user is having option to recovery. User’s don’t have right to alter records after particular time period and also it is not having option to alter other patient records.

**2.2 Product Features**

* Authentication for different users.
* Real-time validation of all fields and database to prevent errors.
* Printing of prescription, certificate.
* History of patients recorded in database.
* Maintaining the billing section of the polyclinic.
* Maintains the salary and expenses.
* Built in backup and restore facilities.
* LAN compatible.
* Compatible with any platform.

**2.3 User Classes and Characteristics**

The admin,doctors, receptionists and patients will be the main users. The system is also designed to be user-friendly.

* Admin
* Receptionist
* Doctors
* Patients

**Admin:** Admin should have prior knowledge of the system. Admin is able to controlthe whole system. He/she can add, delete, update and modify the system.

**Receptionists:** in order to add or delete the details of the patients come for the treatment and accordingly provides identity to them.

**Doctors:**Doctor should fairly know about the usage of the system. Doctors are able to see the respective appointments taken. And also can view patient’s details and records.

**Casual users:**Anyone can view the information of the polyclinic.Patients can view their own records and doctors details and timings. And also can take appointment online.

**2.4 Operating Environment**

This proposed software will be used in Windows platform in the version of Windows 7.MySQL will be used for the database to hold the patients, doctors and other employees’ details.

* + Operating system: Windows platform, linux, Mac OS
  + Processor: Pentium 4
  + Processor speed: 2.5 GHz
  + RAM: 512MB
  + Hard disk drive: 40GB

**2.5 Design and Implementation Constraints**

The COS system shall be a web based application system running in a windows environment. The system shall be developed using PHP and MySQL server.

A person who has no knowledge of computers will find it difficult to understand the system. But with a little knowledge it will be very easy to handle the project.

Standard compliances. This document follows IEEE standard for software requirement specification.

* 1. **User Documentation**
* A HTML Help file with a tutorial and full help on all features provided.
* Help pages will be providing document with screen shots.
* If the user has more queries regarding this website then he/she can contact with the administrator through contact us page.

**2.7 Assumptions and Dependencies**

* The code should be free with compilation errors/syntax errors.
* The product must have an interface which is simple enough to understand.

**2.8System Features**

**2.8.1 Login Account**

**2.8.1.1Description:**

To open the user account the users have to enter login information.

**2.8.1.2 Stimulus/response**

User must enter valid user id and password to open user page. If it is valid then it links to user account page. If the user is new to the polyclinic he/she has to register.

**2.8.1.3 Basic data flow**

* Here first the user enters login id and password.
* After entering the login information system checks whether entered login id and password is valid or not.
* If it is valid then it is linked to the user account.
* If the user doesn’t have user account then user needs to register.

**2.8.1.4 Functional requirements**

Here administrator, receptionist, doctors and patients are using the different login pages.

**2.8.2 Admin**

**2.8.2.1 Description**

Admin is a super-user. He/she is able to control the whole system. Admin can add, delete, update and modify the system.

**2.8.2.2 Stimulus and response**

Admin logs into the admin account and do the relevant changes daily. Admin keeps the system up-to-date.

**2.8.2.3 Basic data flow**

* Admin logs into the system.
* Can add/delete/update/modify records.
* He/she controls the entire system.

**2.8.2.4 Functional requirements**

Admin has got the rights to add/delete the doctor, employees, old records and can view the entire system.

**2.8.3Online appointment**

**2.8.3.1 Description:**

Patients can take appointments through online by entering Date and Time. Receptionist approves this depending on doctors. Patient has to register or login to take appointment through online.

**2.8.3.2 Stimulus/response**

Patients should enter valid information to take appointment online. After entering appointment details receptionist verifies the information and gives date and timings.

**2.8.3.3 Basic data flow**

* Patient first logs into the website.
* After logging in, the patient enters the appointment information.
* The receptionist verifies the sent details from the patient and updates date and time.
* Patient receives the approval message with date and time.

**2.8.3.4 Functional requirements**

* Patients can take appointment online or through phone call.
* patient can view the old appointment details and their records.

**2.8.4 Doctors Module**:

**2.8.4.1 Description:**

Doctors can check appointments taken by patients. Doctors can view Patients Test reports and he can enter and view suggested prescription details. And also can check billing and monthly salary details.

**2.8.4.2 Stimulus/responses:**

Here doctor enters the patient report and enters prescription details.

**2.8.4.3 Basic data flow**

* doctor logins to the website.
* Doctor checks old record and appointment details.
* Doctor enters prescription and test reports.
* He can view salary and billing details**.**

**2.8.4.4 Functional requirements**

Doctor can view patient appointment, old records, prescription, payment details. And also can view his monthly salary.

**2.8.5 Billing and Maintenance**

**2.8.5.1 Description :**

In this page receptionist enters doctors consultancy fee, laboratory charge, etc. Maintenance page which calculates employee salary, expenses. Every month it calculates employee salary, total expenses. Expense and receptionist salary will shared equally by each doctors.

**2.8.5.2 Stimulus/response**

Receptionist enters consultancy fee, laboratory fee, etc of each patient. Every month system calculates automatically doctor’s earnings, expenses, employee salary etc.

**2.8.5.3 Basic dataflow**

* Receptionist enters the consultancy fee and laboratory fee
* Receptionist enters the daily expenses, maintenance fee.
* Every month system generates employee salary , expenses, patients bill, etc. salary and expenses will be shared equally by each doctors
* System checks doctors earnings.

**2.8.5.4Funtional Requirements**

* Consultancy fee
* Daily Expenses
* Employee Salary
* Doctors earnings

**3. ExternalInterfaceRequirement**

All the interactions of the software with patients, doctors, receptionist, hardware and software are specified here.

**3.1 User Interfaces**

The user interface is designed in PHP. The developer will have to study the designing of the product. The use of the controls and the component from the Add items feature of the PHP. The user of the product will get very user friendly web page which will be very easy to work with.

**3.2 Hardware Interfaces**

This system doesn’t require any hardware interface. The one used here is monitor, keyboard and mouse.

The system should have these hardware requirements:

* Processor: Intel Pentium4 3.2GHz or above
* Memory: 512MB or above
* Hard Disk Drive: 40GB or above

**3.3 Software Interfaces**

* Operating System: Windows, Linux, Mac OS
* Front End: PHP(Hypertext Preprocessor)
* Back End: MySQL

**3.4 Communications Interfaces**

Communication is done through internet and intranet.

**4.Other Non-functionalRequirements**

**4.1 Performance Requirements**

Cos manages facilities required by the casual users quickly and easily. It offers to take appointments faster through online. It takes appointment details from the patients and send the appointment date and timings to the particular patient.

**4.2 Safety Requirements**

* In case the user forgets or loses Password, the repair functionality helps by choosing “forgot password” option in the main login window.
* To avoid this kind of situations, backups can be done regularly.
* While typing the password, if the caps lock is on it must be notified.
* If the system is kept idle for 10 min the session will expire.

**4.3 Security Requirements**

This system is provided with authentication without which no user can pass. So only the legitimate users are allowed to use the application. If the legitimate user’s share the authentication information then the system is open to outsiders.

**4.4 Software Quality Attributes**

**Reliability:** Good validations of user inputs will be done to avoid incorrect storage of records.

**Maintainability:** During the maintenance stage, SRS document can be referred for any validations.

**Portability:** This system can be installed in any personal computers supporting windows operating system platform.

**Flexibility:** The system keeps on updating the data according to the transactions that takes place.

**Timeless:** The system carries out all the operations with consumption of very less time.

Security: Security of the system is maintained d by giving access to only authenticated user id and password.

**5. Other Requirements**

**5.1 Other Requirements**

**Database:** The records of all operations are stored in database.