Software Requirements Specification

for

Online Health Monitoring System

Version 1.0 approved

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27 jan 2017

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This SRS describes the software functional and nonfunctional requirements for release 1.0 of the Online Health Monitoring System (OHMS). This document is intended to be used by the members of the project team that will implement and verify the correct functioning of the system. Unless otherwise noted, all requirements specified here are high priority and committed for release 1.0.

1.2 Product Scope

The Online Health Monitoring System makes promising technology to enable patient monitoring outside the conventional clinical system, i.e., the patient can be monitored remotely. Consequently, such system increases the access to care the patients and decreases the delivery cost realted to healthcare.This would also help to check patiient when they are outsation.Doctors can easily monitor them and give advices and reference in case of emergency,if any.

1.3 References

Ref.1 *http://www.ece.rochester.edu/~gsharma/papers/Moeen_HealthMonitor_SCC2015.pdf*
Ref.2 *User interface:*
https://www.google.co.in/search?q=login+and+register+screen%27&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwih4MXgluLRAhUEKo8KHQteAXYQsAQIHQ&biw=680&bih=749#imgrc=cT7yEN74cycv8M%3A

2. Overall Description

2.1 Product Functions

User may be a patient and a doctor,depending on which he/she log and register.

- User able to Register with system using name,email address and password.If patient then provide DOB also.
- Patient
  - ➔ Log-in: Patient login using userid and password.
  - ➔ Health-status:Display health status and different graphs of his health status
  - ➔ See-doctor:See all doctors registered with system.
  - ➔ consult:Consult doctor for health check-up.
  - ➔ Pay:Patient pay his consultancy fee to his chosen doctor
  - ➔ Log-out:Patient log-out from system.
- Doctor

- ➔ Log-in:Doctor login using userid and password.
- ➔ Check:See all patient registered with him.
- ➔ Monitor:Can monitor health status of registered patients to him/her.
- ➔ Ask:Asked patients to consult with him.
- ➔ Log-out:Log out of system.

2.2 Operating Environment

OE-1: The Online Health Monitoring System shall operate with the following Web browsers: Microsoft Internet Explorer versions 5.0 and 6.0, Google chrome versions 55.

OE-2: The Online Health Monitoring System shall operate on a server running the current corporate approved versions of Red Hat Linux and Apache WebServer.

OE-3: The Online Health Monitoring System shall permit user access from for doctors and patients through safe internet connection.

OE-4:Machine should be a 64-bit artitecture.

2.3 Design and Implementation Constraints

CO-1: The system shall use the current corporate standard Oracle database engine.
CO-2: All code should be written in java-7.
CO-3: Data from various sensors should synchronize per hour.
CO-4: Nobody could modify the stored information.
CO-5: All users MUST register themselves into the system.
CO-6: Doctors can access the health information of patients registered to them only and patient can only view his/her health status.
CO-7:GUI is only in English.
CO:8-Only registered patients and doctors will be authorized to use the services.

<Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer's organization will be responsible for maintaining the delivered software).>

2.4 Assumptions and Dependencies

2.4.1 database

Use of Oracle database for storing information of patient and doctors.

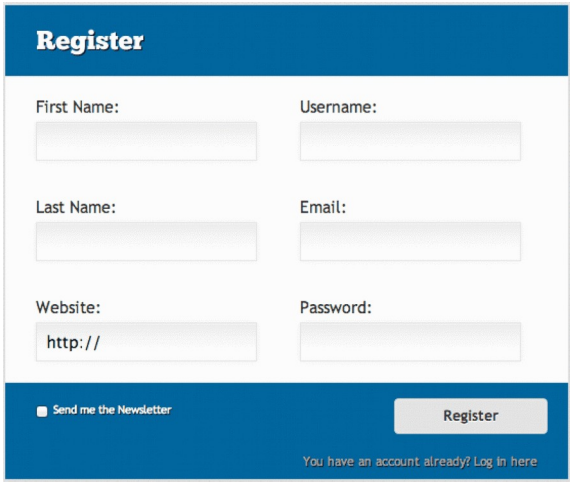
<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>

3. External Interface Requirements

3.1 User Interfaces

3.1.1 Registartion and Login Portal

As a online health monitoring system,will be primary channel through which user access information in database.



- *User interface for registration and login will like as given in above figure.*
- *After login and register different screen will come,that will according to function defined.*

➔

3.2 Hardware Interfaces

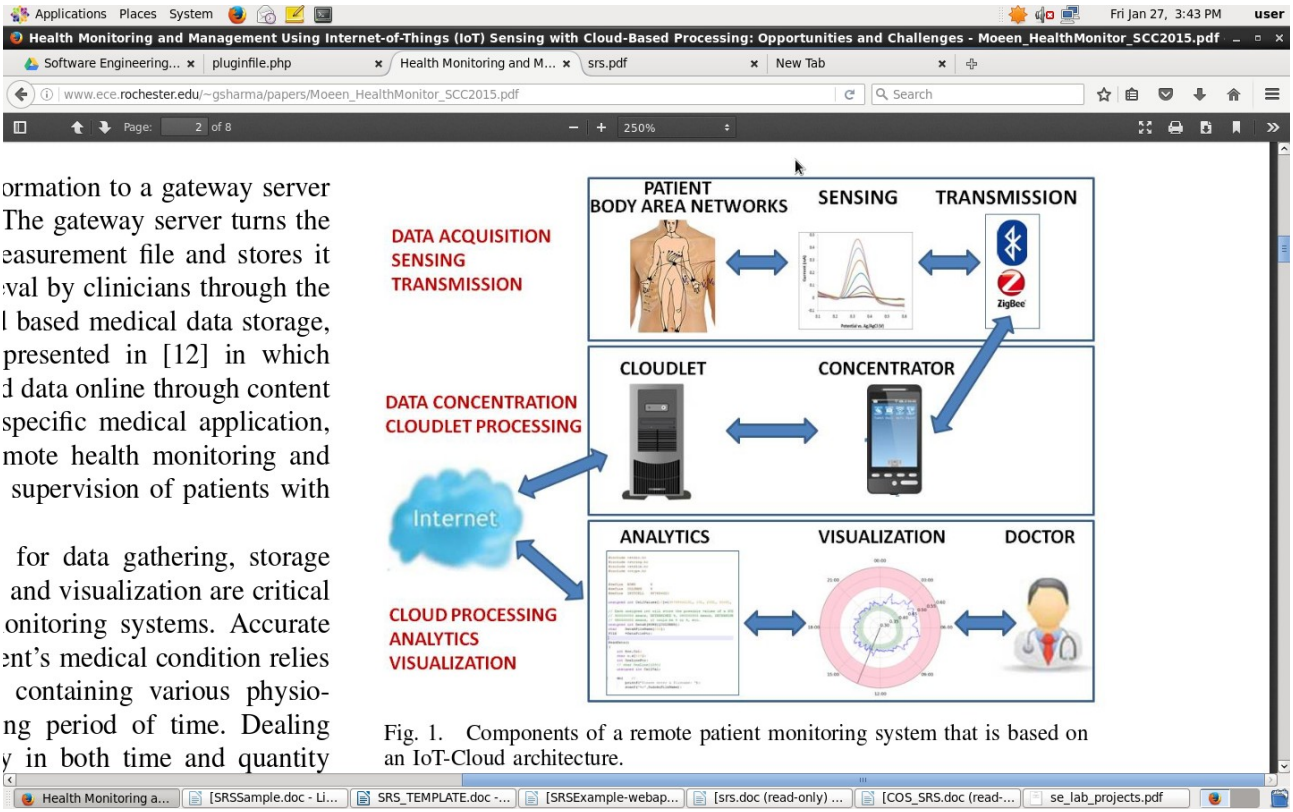
- *All sensors must work properly.*
- *All sensor will synchronise per hour basis whenever internety connection is available.*
- *Temperature sensor will take body temperature in degree Fahrenheit and patient can also see there.It then store data and send to server or database when internet is available.*
- *Blood pressure and heart rate sensor take data and send to server.*
- *All sensors should as per reccommendation.*
-

3.3 Software Interfaces

- *Software should be user friendly.*
- *We use e-wallet transaction for payment through secure connection.*
- *Client on Internet*
  - *Web Browser, Operating System (any)*
- *Web Server*
  - *WASCE, Operating System (any)*
- *Data Base Server*
  - *Oracle, Operating System (any)*
- *Development End*
  - *java*

3.4 Communications Interfaces

3.4.1 Database will communicate via an encrypted remote connection.
3.4.2 Data from different sensors will synchronise per hour through internet connection.
3.4.3 All data will store in cloud.
3.4.4 Client (customer) on Internet will be using HTTP/HTTPS protocol.
3.4.3 Client (system user) on Internet will be using HTTP/HTTPS protocol.



4. System Features

4.1 Register

- *Patient :Patient will register using his name,email address,and password.He has to also enter his date of birth for age calculation of him/her.*
- *Doctor: will register using his name,email address,and password.*

4.2 Log in

- *Patient.LogIn*
  - *He will log-in using his user id and password.System wil check data in database and if successful then log-in.*
  - *Response:If it is successful then show your log in successful.*
    - *Patient.Health_status:The system will display health status of patient 24 hour duration.*
      - *Patient.Health_sataus.Day:Show status of health day wise.*
      - *Patient.Health_status.Month:Show status of health month wise.*
      - *Patient.Health_satus.Year:Show status of health year wise.*

  - *Patient.Age:Age of patient will calculated automatically,and display on the screen.*
  - *Patient.Sensor:Display different sensors which is currently using.*
    - *Patient.Sensor.Temperature:Display temperature data and graph of patient during 24 hour.*
    - *Patient.Sensor.Blood_pressure:Display Blood Pressure data and graph of patient during 24 hour.*

- *Patient.Sensor.Heart_rate:Display Heart Rate data and graph of patient during 24 hour.*
- *Patient.See_registered_doctor:Patient will able to see all registered doctor on system.*
- *Patient.Consult_doctor:If patient want,then he can consult with registered doctor on system,which he has just seen.*
- *Patient.Pay:Pay consultancy fee to doctor using his account balance strored in Wallet.*
- *Patient.See.Wallet_balance:Show the wallet balance of patient which is he using.*
- *Patient.LogOut:Log-out from System.*

- Doctor.LogIn
  - *He will log-in using his user id and password.System wil check data in database and if successful then log-in.*
  - *Response:If it is successful then show your log in successful.*

  - *Doctor.Registered_Patient:Display all registered patient to him.*
  - *Doctor.Registered_Patient.Select:Select registered patient.*
  - *Doctor.Registered_Patient.Select.Monitor:Monitor overall health status of the registered selected patient.*
  - *Doctor.Registered_Patient.Select.Sensor:Can see various sensors data of patient.*
  - *Doctor.Registered_Patient.Select.Consult:Patient will consult him on recommendation.*
  - *Doctor.Balance:See balance in his wallet after receiving payment through patient.*
  - *Doctor.LogOut:Log-out of System.*
  - *Response:Thanks for using System.*

5. Other Nonfunctional Requirements

5.1 Performance Requirements

5.1.1 The system shall accommodate 400 users during the peak usage time window of 8:00am to 10:00am local time, with an estimated average session duration of 8 minutes.
5.1.2 Responses to queries shall take no longer than 7 seconds to load onto the screen after the user submits the query.
5.1.3 The system shall display confirmation messages to users within 4 seconds after the user submits information to the system.

5.2 Software Quality Attributes

Availability-1: The Online Health Monitoring System shall be available to users on the internet and to dial-in users 99.9% of the time.
Robustness-1: If the connection between the user and the system is broken in between any process or enquiry.Users have to relog in to system.If connection broken during payment then Online Health Monitoring System shall enable the user to recover an incomplete transation.

6. Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>