FUNCTIONAL SPECIFICATION

Project Code:	OCS-01
Project Name:	Online Clinic System

Revision History

Version (x.yy)	Date of Revision	Description of Change	Reason for Change	Affected Sections	Approved By
1.00	19-Sep-2011	Initial Draft			
2.10	Sept-2013	Revision	Mapping with CPC Tool		
2.20	Nov-2013	Revision	Aligning with UCF		

Affected Groups

Development Engineering
Quality Assurance
XYZ Clinic

List of Reference Documents

Name	Version No.
1. Request For Proposal	1.1
2.	
3.	
4.	

Prepared by/Date **Reviewed by/Date** **Approved by/Date**

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1 Introduction

XYZ Clinic provides health service facilities to patients across many cities.

XYZ Clinic plans to develop “Online Clinic System” - a standalone/Web application [Core Java Batches - Swing Application; J2EE Batches - Web Application] where a patient can fix up an appointment with a Doctor over the network, record his/her ailments and choose a Specialized Doctor depending on his/her ailments or health complaints.

Scope and Overview:
The scope of the Online Clinic System (OCS) will be to provide the functionality as described below. The system will be developed on a Windows operating system using Java/J2EE.

2 System Overview

The Electronic Voting System should support basic functionalities (explained in section 2.1) for all below listed users.

- Administrator (A)
- Reporter (R)
- Patient (P)

2.1 Authentication & Authorization

2.1.1 Authentication:

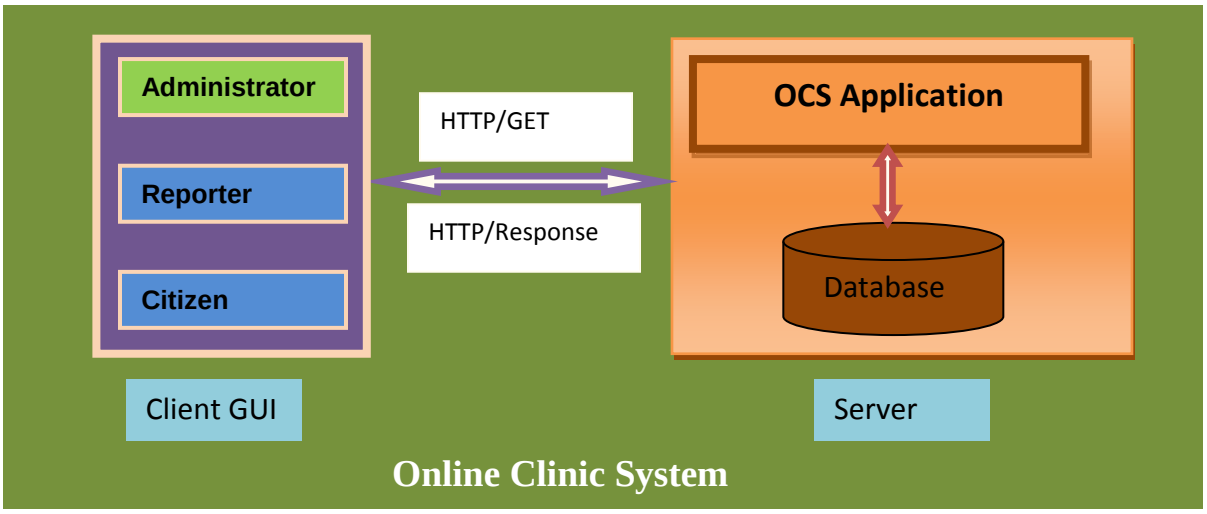
Any end-user should be authenticated using a unique login ID and password.

2.1.2 Authorization

The operations supported and allowed would be based on the user type. For example, Administrator has the rights to add/modify/delete election details and candidate details.

2.2 Functional Flow

The functional flow of the messages across different application components is shown below.
Ex. - Web Application.



2.3 Environment

The system will be developed on a Windows XP machine using J2EE, JSP/HTML, and JDBC.

- Intel hardware machine (PC P4-2.26 GHz, 512 MB RAM, 40 GB HDD)
- Server – Apache Tomcat 6 or higher
- Database – Oracle 9i or higher
- JRE

- Eclipse IDE

3 Sub-system Details

The Online Clinic System (OCS) is defined with three types of users (Administrator, Reporter & Patient), wherein all users need to login successfully before performing any of their respective operations.

Find below (section 3.1 & 3.2) tables that provides functionality descriptions for each type of user / sub-system. Against each requirement, indicative data is listed in column 'Data to include'. Further, suggested to add/modify more details wherever required with an approval from customer/faculty.

3.1 Administrator

The administrator as a user is defined to perform below listed operations after successful login.

ID	Objects	Operations	Data to include	Remarks
AD-001 to AD-004	Doctor	Add View Modify Delete	Doctor Name, Age, Specialization, Years of Experience	
AD-005	Appointment	Suggest Doctor	PatientID, DoctorID, Appointment Details	

3.2 Reporter

The reporter as a user is defined to perform below listed operations after successful login.

ID	Objects	Operations	Data to include	Remarks
RE-01	Leave	Add	DoctorID, Leave Details	

3.3 Patient

The patient as a user is defined to perform below listed operations after successful login.

ID	Objects	Operations	Data to include	Remarks
US-001 to US-003	UserProfile	Register	Patient Name, Address, Gender, Age, Sex etc	RegistrationID should be auto generated
US-004	Appointment, Doctor	Request appointment	DoctorID, Ailment, DateOfAppointment etc	
US-005	Doctor	View	Doctor Details	

[Swing Application - Core Java]

* US-003 : Allow user to check appointment details of multiple doctors simultaneously.
  - Hint: Use multithreading.
* AD-003 : Allow admin to save doctor details in HTML format.

[Web Application - J2EE]

* US-006 : Use | Create Web services to check available appointment for particular Time Slot.
* AD-003 : Allow admin to save doctor details in PDF format.

NOTE:

* Appointment status should be efficiently handled upon request for an appointment or cancellation of appointment for a Doctor on a specific day and Time.
* On deleting Doctor Details, appointment for the same should be checked and intimated or suggest to Patient for available doctors with same specialization.

3.4 Login | Logout

[Swing Application - Core Java]

- Use System properties to enable the application to Startup with default/last user details for login.
- Enable the application to run from command prompt with user credentials.

[Web Application - J2EE]

- Implement Session tracking for all logged in users before allowing access to application features. Anonymous users should be checked, unless explicitly mentioned.

4 Data Organization

This section explains the data storage requirements of the Online Clinic System and **indicative data description** along with suggested table (database) structure. The following section explains few of the tables (fields) with description. However in similar approach need to be considered for all other tables.

4.1 Table: UserProfile

The user specific details such as name, address, authentication and authorization / privileges should be kept in one or more tables, as necessary and applicable.

Field Name	Description
UserID	Customer ID is auto generated after registration and it is used as LoginID.
Name	Customer Name [first name & last name]
DOB	DOB of Customer
Gender	Gender of user [Male / Female]
PresentAddress	Present Address of Customer
PermanentAddress	Permanent Address of Customer
PhoneNumber	10 digit contact Number
Emailid	Email ID of the traveler

4.2 Table: UserCredentials

The table contains Authentication Information for Administrator, Reporter , Patient

Field Name	Description
UserType	Administrator and Customer
UserID	User Identification, corresponding to UserProfile table
Password	Password
LoginStatus	Login status of the user

4.3 Table: PatientDetails

This table contains information related to the passport office for requesting appointments.

Field Name	Description
Full Name	Name of the patient
Age	Age of the patient in year
Gender	Gender of the patient
Symptom	Sign of disease

5 Assumptions

- The scope of the application is limited to only one clinic.
- Each patient will hold only one Appointment ID for one successful appointment
- The reporters are assumed to be already registered with the system.
- Doctor is fixed by the admin based on the availability of a doctor. Every appointment should be of 15mins duration.

- The number of appointments for a particular Doctor may attend patients from 9am to 12pm and from 2pm to 5pm.

6 General Expectations

- The server should be a concurrent server servicing multiple clients
- Database can be implemented using Oracle 9i or above
- To begin with, the application should support at least 1 admin and 2 customers.
- Compilation and Build should be done using Eclipse IDE
- Source-code and all documents must be maintained (checked-in) in configuration management system (subversion)
- Wipro's coding standards (for Java) should be followed,
- Deliverables should include compiled and tested source code, Unit Test Code (Using WiproUT), WiproStyle report and System test-plan / report documents.

NOTE:

1. **Validation of user Data**[1]
   - ✓ Struts 2 validation via XML or annotations or Spring MVC using JSR-303 annotations
   - ✓ AJAX validation without forcing the page to reload (Wherever applicable)
   - ✓ JavaScript validation (if necessary)
   - ✓ In case of Swing applications, use 'ClassInputVerifier' for validation
2. **UI Design –(for Web Application) Use DIV/CSS to control the style and layout**
3. **Create at least one SQL DML-statement inside PL/SQL blocks**

7 Acceptance Criteria

All P1 requirements have to be mandatorily implemented

8 Traceability to Requirements

Appropriate requirements from RS and FS are mapped here.

Document Reference ID & Description: (Doc ID from which this document is derived)		
Sl. No.	**Reference document: RS Requirement/Feature (Section ID/Name)**	**Current document: FS Location (Section ID/Name)**
1.		
2.		

9 Acronyms and Glossary

Acronym and glossary for this document mentioned in the below table.

Abbreviation	**Remark**
OCS	Online Clinic System
RS	Requirement Specification
FS	Functional Specification

[1] Validations should be performed at all levels of application appropriately.