**** COMSATS University Islamabad, Attock Campus

Assignment# 02

Software Requirement Specification

Project Title: Competitive Counselling System

Subject: Software Quality Engineering

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# INTRODUCTION

Which courses are good??? Which are the best colleges for that course?? How to get into those colleges? What is the exam pattern?? Student have a lot of confusion about the courses and what exams they need to appear for getting into that course. Competitive Counselling System(CCS) is a web based application system which guides the students and help them overcome these situations. CCS is designed to aid student and inform them about various streams and different courses.

The Competitive Counselling System (CCS) shall be used by students for getting information about various courses, the exam pattern and dates. CCS can also be used by students to clear their queries by posting questions which can be answered by fellow students and counselling experts. It shall also be used by authorized administrators who will be able to view the students queries and student profile and also edit the content of website. The purpose of this document is to analyze and elaborate on the high level needs and features of CCS. It focuses on the capabilities and facilities of CCS. The details of what all are the needs of CCS and if it fulfills these needs.

## PURPOSE

The purpose of this Software Requirement Specification (SRS) document is to describe the external behavior of CCS. Requirement Specification defines and describes the operations, interfaces, performance, and quality assurance requirements. The document also describes the non-functional requirement such as the user interfaces. It also describe the design constraints that are to be considered when the system is to be designed, and other factors necessary to provide a complete and comprehensive description of the requirements for the software. The SRS captures the complete software requirements for the system, or a portion of the system.

## DOCUMENT CONVENTION

The SRS will provide a detailed description of the Competitive Counselling System. This document will provide the outline of requirements , overview of characteristics and constraints of system.

## INTENDING AUDIENCE AND READING SUGGESTION

The intending audience for SRS consists of:

* Developers
* Project managers
* Marketing staff
* Users
* Testers
* Documentation writers
* Client
* Professor

## SCOPE

The SRS captures all the requirements in a single document. The CCS that is to be developed provide the students with the details of all the courses possible and their best colleges. The college-wise ranking for each courses and the previous year question papers of those exams. It aims at catering the exam needs of students. The CCS is supposed to have the following features:

* The system is up and running all day.
* The system provides login facilities to the administrators.
* The system provides a facility to store the content of application which will be used by students and visitors.
* The system provides every user to post their queries and respond to other’s queries.
* The system provides an easy features to administrators to look at traffic statistics.
* The system provides the facility to the administrators for the content of the system to be managed.
* Visitors have the privilege to create their account and login.
* Account holder can also subscribe to exam alert services provided by CCS.

## REFERNCES

* <https://www.google.com/search?q=srs+on+career+counselling&oq=srs&aqs=chrome.1.69i57j35i39l2j69i59j0j69i60.4752j0j7&sourceid=chrome&ie=UTF-8>
* <https://www.google.com/search?sxsrf=ACYBGNR_jtqt813kz62rAWEwZruZFspBTQ%3A1572888542985&ei=3l_AXbPaO8GYadSQtagP&q=competetive+exam+counsellingsrs&oq=competetive+exam+counsellingsrs&gs_l=psy-ab.3..33i160.34615.47220..47620...0.2..0.2692.19568.4-3j4j6j0j1j4......0....1..gws-wiz.......0i71j0i7i30j0j0i30.OVLYEYAF72c&ved=0ahUKEwizwYC3itHlAhVBTBoKHVRIDfUQ4dUDCAs&uact=5>

# OVERALL DESCRIPTION

## PRODUCT PERSPECTIVE

CCS aim at providing each and every minute detail of competitive examination and higher education to students. Students get all the information at a single source which is the objective of developing the system. The students may create an account or continue as guest. The system contains the data for each of the screams and their examination and the best colleges. The students can view the results and can be subscribe to our mail services.

CCS provide the login facility to the administrators. After authentication the administrator can manage the content of the system. Administrator can also view the traffic statistics and can view the accounts of each of students. The administrator can also mail the exam details and other notification to the subscribed students.

The product to be developed has interactions with the user; Students or Visitors, Administrators who manages the CCS.

## PRODUCT FUNCTIONS

The Competitive Counselling System provide the students the details of all the streams and their courses along with the exams. Login facility to the administrator is provided in order to manage the content of the system. The product functions are more or less the same as described in the product perspective. The function of the system include the system providing the different type

of services based on the type of users[Students/Administrator].

* The user should be able to view the courses, exam, exam papers, results and college ranking for each of the courses.
* Provision to create an account in order to substitute to mail services and receive other notification about the exam detail of his/her preference.
* User should be able to post queries answer and answer to the queries of other users as comment .
* The administrator is provided with a login id and password using which he should be able to login to CCS.
* Administrator is provisioned to be able to manage the content of the system.
* The administrator can view the registered users and also the traffic statistics i.e. the total number of visit to the system.

## USER CLASSES AND CHARCTERISTICS

The users of the system are the students and the administrators who maintain the system. The students and the professors are assumed to have basic knowledge of the computer and internet browsing. The administrator of the system to have more knowledge of the internal of the system and is able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system. The power user interface, user manual, online help and the guide to install and maintain the system must be sufficient to educate the user on how to use the system without any problem.

## OPERATING ENVIROMENT

The system should have an internet connectivity in order to access the CCS. The system should have a web browser which should support java script. The system should have a minimum RAM of 256 MB AND A CPU clock frequency greater than 800 MHz . The screen resolution is expected to be 1024 by 768 pixels for optimum view.

## DESIGN AND IMPLEMENTATION CONSTRAINTS

* The information of all the courses, exams, colleges, paper and their feedback is stored in a database that is accessible by the CCS.
* The information security system must be compatible with the internet applications.
* The CCS is connected with the server and is up 24/7.
* The users access the CCS from any computer that has internet browsing capabilities and an internet connection.
* The administrator must have their correct username and password to access their administrator mode.

## USER DOCUMENTATION

The software will be provided with a video tutorial CD , describing the way to use the software. A hardcopy manual will also be provided along with software to facilitate the user in using the software in best way. On-line help will be provided to users and administrators which will guide them in using the software in an optimum way.

## ASSUMPTION AND DEPENDENCIES

* The users have sufficient knowledge of computers.
* The users computer should have internet connection and internet server capabilities.
* The user should know English language as the user interface will be provided in English.
* The CCS can access the database.

# EXTERNAL INTERFACE REQUIRMENTS

## USER INTERFACES

The user interface will make use of existing Web browsers such as Mozilla Firefox or google chrome. The user interface shall be designed in C Sharp WPF application.

## HARDWARE INTERFACES

The existing wide area network or internet will be used for collecting data from the users and also for updating the content of system by administrators.

## SOFTWARE INETRFACES

A firewall will be used with server to prevent unauthorized access to system.

## COMMUNICATION INTERFACES

The Competitive Counseling System will be connected to the World Wide Web.

# SYSTEM FEATURES

## FUNCTIONAL REQUIRMENTS

**REQ-1:** Providing user the details of all competitive exams and other details.

**REQ-2:** Enabling users to post queries and respond to others queries using comments.

**REQ-3:** Administrator login for administrators.

**REQ-3:** Viewing of traffic stats and Users details by administrators.

**REQ-4:** Managing of content by administrator.

# OTHER NON FUNCTIONAL REQUIRMENTS

## PERFORMANCE REQUIRMENTS

### RESPONSE TIME

The feedback form should be able to be downloaded within seconds using a 56k modem. The access time for a mobile device should be less than a minute. The system should respond to the alumnus is not less than 2 seconds from the time of request submittal. The system shall be allowed to take more time when doing large processing jobs.

### ADMINISTRATOR RESPONSE

The system shall take as less time as possible to provide service to the administrator or the liberarian.

### THROUGHPUT

The number of database transactions is directly dependent on the number of users, the user may be the administrator, alumni or professors of the college.

### CAPACITY

The system capability depend on the capability or limit of hosting server.

### RESOURCE UTILIZATION

The resources are modified according to the input provided by alumni and also according to the administrator incase he adds a new user.

## SUPPORTABILITY

The system designers shall take in consideration the following supportability and technical imitations.

### INTERNET PROTOCOLS

The system shall be comply with the TCP/IP protocols standards and shall be designed accordingly.

### INFORMATION SECURITY REQUIRMENTS

The system shall support the VIT information security requirements and use the same standard as the VIT information security requirements.

### MAINTENANCE

The maintenance of system shall be done as per maintenance contract.

### STANDARDS

The coding standards and naming conventions will be as per the IEEE standards.

## DESIGN CONSTRAINTS

### SOFTWARE LANGUAGE USED

The language that shall be used for coding the Alumni Feedback System are hypertext per processor (PHP) , SQL , HTML , JavaScript, CSS. For working on the coding phase of Alumni Feedback System the Internet Information Service (IIS) server shall be installed.

### DEVELOPMENT TOOLS

The developers will make use of the available NetBeans Tool with the PHP extension. They will also make use of online references available for developing programs in PHP, HTML ,and the scripting language, JavaScript.

### CLASS LIBRARIES

Developers will make use of existing PHP libraries available for PHP.

## LISCENCING REQUIRMENTS

The usage is restricted to those who purchase the CCS software and by using the show that they agree by the rules of CCS.

# OTHER REQUIRMENTS

## APPENDIX A : ACCRONYMS AND ABBREVATIONS

* CCS – Competitive Counselling System
* HTML – Hyper Text Markup Language
* CSS – Cascading Style Sheets
* PHP – Hyper Text Pre Processor