**University of Chittagong**

# Course Code: CSE 616

**Course Title:** Web Engineering Lab

**Deliverable:** System Requirement Specification document of IPCP

|  |  |
| --- | --- |
|  | Submitted to Rukan Uddin Faruqui  Associate Professor  Dept. of Computer Science & Engineering  University of Chittagong. &A.H. M. Sajedul HoqueAssistant Professor Dept. of Computer Science & Engineering  University of Chittagong.  **Submitted by:**  Muhammod Ibrahim Khalil  ID : 15701041  Session: 2014-2015 |

**Date of Submission:** 24-07-2017

**1. Introduction**

**CU-IPCP** (Chittagong University-Internal Programming Contest Platform) is a web application which will be developed as an assistive tool for the students during programming contest. The goals of our project are to develop a simple, user friendly, dynamic, online based contest platform which reduce the complexity of as usual system. It minimizes the wastage of time during a contest.

User are very important part of any system. So, before developing a system, first we need to find out the requirements of different groups of user. . All requirements are written in detail in a document which is called system requirements specification document. A system requirements specification (SRS) document is a comprehensive description of the intended purpose and environment for [system](http://searchsoa.techtarget.com/definition/software) under development. The SRS fully describes what the system will do and how it will be expected to perform.

Four sections are included in this report. Introduction section contains a brief introduction the project. In the User Requirements section, the user requirements are described as a story. In the System Requirements Specifications section, we have listed basic two types of system requirements like functional requirements and non-functional requirements. The last section is conclusion, describes the summary of this report.

**2. User Requirements**

The success of a project lies on the satisfaction of users. To develop a system, we first need to find out the requirements of the different users so that full satisfaction of users can be attained which is a measure of successfulness of a project. Requirements are description that the system should do under some constrains. User requirements are statements in natural language along with diagrams of what services the system is expected to provide to system user and the constrains under these services. We have met different types of users of our system. We met different user groups of our system and discussed with them about their requirements. User requirements are as follow.

**Functional Requirements:**

1.System will provide an online programming contest platform for students for group wise and individual programming contest.  
2. Problem setter can easily contribute his/her problem description and required dataset.  
3. Contestant can submit his/her solution online and can see the verdict of the solution.  
4. Contestant can see live ranking while the contest is running.  
5. Contestant can see his/her submission verdict.

6. Any clarification will be notified to the contestants while contest is running.

7. Contestant can create group under a coach.

8. Each contest performance is recorded so that corresponding coach can see the progress of the group online.

**Non-Functional Requirements:**

1. System will be fast and user friendly.  
2. System will be responsive in nature.  
3. System will be secure and reliable.

**3. System Requirement Specifications**

System requirements contains detailed description of the system’s functions and services along with optional constrains. It defines exactly what is to be implemented. We analysed the story of the user requirements to find out the requirement of the system.

The requirements of the system can be categorized into two categories, namely:

1. Functional Requirements
2. Non-functional Requirements

***Functional Requirements:*** Functional requirements are description of services. Besides it also includes how system will react for particular input and behave in particular situations. It is supported by non-functional requirements. The functional requirement of our system is given below:

1. The System shall avail coach user to sign up as Coach into the system:

1.a Any teacher throughout the department can open an account as coach

in our system by providing his/her name and other necessary information.

1. The system shall avail general user to sign up as User into the system.

2.a Any user throughout the department can open an account in our system as user by providing required information.

1. System shall facilitate the users for an online contest platform

3.a User can contribute problem and dataset for the contest.

3.b User can host contest any time after preparing problem set.

3.c While user is hosting any contest is considered as ‘Judge’ and other user will be considered as contestant except the coaches and the users who have not registered for the contest.

1. The system shall facilitate the contestant for taking the problem solution from the contestant and giving a verdict.

4.a Contestant submit their solution then the system will compare the output of contestant’s solution and give a verdict as result.

1. The system shall facilitate a live ranking.

5.a User can see the ranking while the contest is running.

5.b Ranking is evaluated on time penalty of contestant.

6. The system shall facilitate the whole submissions of the contestant on that contest

6.a Contestant user can see his/her total submission and the verdict of his/her submissions.

7. System shall notify the user if any clarification is needed.

7.a User shall be seen a notification which clarifies any point on that contest.

8. The system shall facilitate user to make group of three contestants.

8.a Three contestants can create group on behalf of a coach which is considered as official group and will be participated in any onsite/online IUPC.

8.b Three contestants can create group unofficially if no coach is included.

9. The system will facilitate to coach for overviewing his/her team performance.

9.a Coach user can see his/her team performances.

***Non-functional Requirements:*** Non-functional requirements are the criteria that can be used to judge the operation of a system. These criteria define some constrains on the services and functions of the system. We have met user groups of our system and tried to find out non-functional requirements. These are enlisted below:

1. The system will response quickly. 1.a The system UI shall be user friendly.

1.b The system will compile the code and show the result quickly.

1.c The system will change the rank list quickly while finding any solved problem.

2.The system shall require internet connection for viewing information.

2.a Acquires and updates information during a running contest via internet.

3. The system data should be secure and reliable.

3.a The system shall be amenable to the rules and regulations.

3.b The data shouldn’t be modified without login.

3.c The data should not be contradictory.

**Conclusion:**  To make a project successful, System Requirements Specifications document is the most important part of the project. It acts as a communication medium between the user and the firm. When the system requirements specification is completed and is accepted by all parts, the requirement engineering phase is finished. It is a prerequisite of designing phase.