Software Requirements Specification

for

VIT Team Registration Portal

Version 1.0 Approved

Prepared by

Anirudh Batra (14BCE0602)
Manav Chawla (14BCE0122)
Manthan Kapoor Jain (14BCE0894)

Vellore Institute of Technology

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Revision History

Name	Date	Reason For Changes	Version

1 Introduction

The following subsections of the Software Requirements Specifications (SRS) document provide an overview of the entire SRS.

1.1 Purpose

The Software Requirements Specification (SRS) will provide a detailed description of the requirements for the VIT Team Registration Portal (VTRP). This SRS will allow for a complete understanding of what is to be expected of the portal to be constructed. The clear understanding of the project and its functionality will allow for the correct software and hardware to be developed for the end user and will be used for the development of the future stages of the project. This SRS will provide the foundation for the project. From this SRS, the registration portal can be designed, constructed, and finally tested.

This SRS will be used by the engineers constructing the portal and the end users. The software engineers will use the SRS to fully understand the expectations of this particular project to construct the appropriate software and hardware. The end users will be able to use this SRS as a "test" to see if the engineers will be constructing the system to their expectations.

1.2 Scope

VTRP is a project that mainly aims at providing an interface to make the team registrations during Gravitas and Riviera easier and less cumbersome. This system is highly reliable, cost effective and extensive within the area of deployment. This platform will be available for every user interface. This will reduce the work load of the organisers and coordinators by providing them the final list of the teams with all their details instead of giving them the list of each and every participant.

1.3 Document Conventions

The following documentation conventions are followed in preparing the SRS:

- All the text in the SRS uses the Times New Roman font.
- All the headings are formatted in bold.

1.4 Intended Audience and Reading Suggestions

The document is created for:

- The intructors of the course 'Software Engineering' for their review and monitoring progress of the project.
- The software development team for their use in analyzing the requirements.

1.5 References

- Object Oriented Modeling and Design with UML-Michael Blaha, James Rambaugh
- Software Engineering, Seventh Edition, Ian Sommerville
- Java - www.sun.com
- Wikipedia – https://en.wikipedia.org/wiki/Software_prototyping#Evolutionary_prototypingDatabase Management Systems – Navathe
- IEEE 830-1998 SRS Template: www.csc.villanova.edu/~tway/courses/csc4181/s2010/srs_template-1.doc
- R. S. Pressman, Software Engineering, a practitioner's approach, 7th edition, McGraw Hill, 2010
- Watts Humphrey, Managing the Software Process, 1989
- Google – www.google.com
- Fundamental of Database Systems by Ramez Elmarsi and Shamkant B.Navathe

The SRS is organized into two main sections. The first is The Overall Description and the second is the Specific Requirements. The Overall Description will describe the requirements of the VTRP from a general high level perspective. The Specific Requirements section will describe in detail the requirements of the system.

2 The Overall Description

Describes the general factors that affect the product and its requirements. This section does not state specific requirements. Instead it provides a background for those requirements, which are defined in section 3, and makes them easier to understand. This project is created using the iterative prototype based evolutionary software development model. Each module is implemented and test before moving on to the next module. The development of the next module will reflect changes to the preceeding model.

2.1 Product Perspective

The VTRP is an independent stand–alone system. It is totally self-contained.

2.1.1 Hardware Interfaces

The portal can be used wherever there is a working modem having access to the internet and connected to the respective databases.

2.1.2 Software Interfaces

The database contains all the information about any details the participants have to give and the event details. There are three types of log-ins: Student Login, Club/Chapter Login and Admin Login. All these information is present in the database and can be accessed only by the admin. In order to access the database, the user has to enter their registration number and their registered mobile number as their password. All these details are received from the Riviera or Gravitas teams. The clubs can view all the teams registered for their event.

2.2 Product Functions

User Access

- Allows for typing in user information
- This software can be accessed after registering for an event
- When a user logs in to the database, the information recorded till that date will be shown in the database.
- The user can view all the teams created till date and join it if there is a vacancy.
- The request has to be approved by the group captain.
- The user can become a group captain by creating a new group.

Club/Chapter Access

- Allows the respective club and chapters to view the final list of teams taking part in their event.

Admin Access

- Can make needed changes to the database.

2.3 Operating Environment

OE-1: The VTRP shall operate on a machine on which Java is installed.
OE-2: The VTRP shall operate on a system with:
Windows 7 & above/ Unix / IOS 7 & above.

2.4 Design and Implementation Constraints

- The VIT Team Registration Portal should be small in size but productive. It should be fast and should decrease the work of the coordinators.
- The VTRP will be available only in the English language.
- All HTML code shall conform to HTML 4.0 standard.
- All scripts shall be written in PHP.

2.5 User Documentation

The VIT Team Registration Portal shall provide an online tutorial, the first time a new user accesses the system and on user demand thereafter.

2.6 Assumptions and Dependencies

- The registerations for Gravitas and Riviera are stored in an online database which we are given access to.
- The operation of VTRP deoends on changes being made in the event lists or registrations by the clubs and chapters.

This section contains all the software and hardware requirements at a level of detail, that when combined with the system context diagram, use cases, and use case descriptions, is sufficient to enable designers to design a system to satisfy those requirements, and testers to test that the system satisfies those requirements.

3 External Interface Requirements

The VIT Team Registration Portal will use only simple input/output devices. This includes the following:

- Mouse
- Keyboard
- Internet connection

3.1.1 User Interfaces

The User Interface Screens are described in table 1.

Table 1: User Registration Screens

Screen Name	Description
Username	Registration number
Password	Registered mobile number

Table 2: App Interface Screen

Screen Name	Description
Admin Login	Administrative access to databases
Club/Chapter Login	Access to list of teams
Student Login	Can register under a particular team or create a new one.

3.1.2 Software Interfaces

- The system shall interface with an SQL Server database
- Windows 7 & above/ Unix / IOS 7 & above (Java Virtual Machine installed)

3.1.3 Hardware Interfaces

Following are the hardware requirements:

- 512 MB RAM

- Pentium 4 and above
- 200 MB of hard disk spaceCommunication Interfaces

The system should have a working internet connection.

4 Functional Requirements

Functional requirements define the fundamental actions that system must perform. The functional requirements describe the core functionality of the application. This section includes the data and functional process requirements.

The security Section describes the need to control access to the data. This includes controlling who may view data.

- VIT Team Registration Portal shall be able to work properly and accurately at all times and multiple circumstances and environments.
- The app should send information regarding any new group registrations so that they can be saved in the database.
- The information should include registration number, registered mobile number and the team name.
- The system shall be reliable, smart, secure, fast and easy to use.
- The password encryption algorithm shall be advanced enough to tackle the everyday problems and shouldn't be easy to break.

The app which shall be running on a system should work properly without any failure or not responding statuses.

5 Nonfunctional Requirements

Functional requirements define the needs in terms of performance, logical database requirements, design constraints, standards compliance, reliability, availability, security, maintainability, and portability.

5.1 Performance Requirements

Performance requirements define acceptable response times for system functionality.

- The load time for user interface screens should be fast.
- The log in information shall be verified within five seconds.
- Queries shall return results within five seconds.

5.2 Logical Database Requirements

The logical database requirements include the retention of the following data elements. This list is not a complete list and is designed as a starting point for development.

User Registration System

- User first name
- User last name
- User phone number

App Interface

- Admin Login
- Club/Chapter Login
    - View the events
    - Download the team details
- Student Login
    - Login
        - Team Registration
        - Team Creation

Database Interface

- College database: Name, Registration No, Mobile No, Event Name, Club Name
- App database:
    - Table 1: Event name, Club/Chapter name, Min. members in a team, Max. members in a team
    - Table 2: Reg No, Name, Team Name, Captain (y/n), Event Name.

5.3 Safety Requirements

The personal data including the name, mobile number and registration number might be compromised due to unauthorized access to th database.

5.4 Software Quality Attributes

5.4.1 Reliability

Specify the factors required to establish the required reliability of the software and hardware system at time of delivery.

5.4.2 Availability

The system shall be available during all the times.

5.4.3 Security

Access to the various subsystems will be protected by a user log in screen that requires a user name and password.

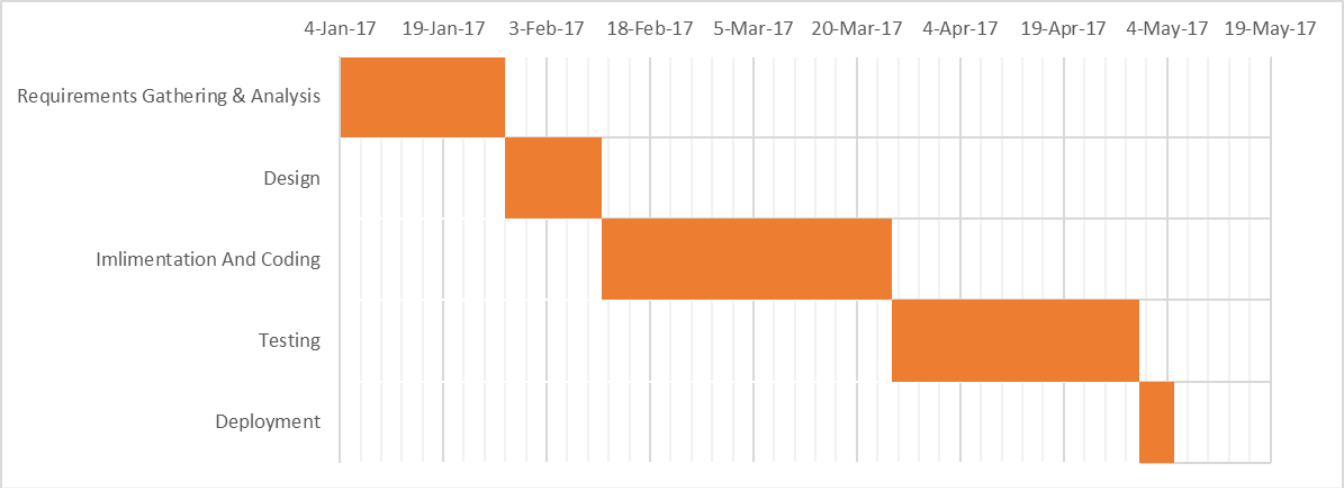
5.4.4 Maintainability

VIT Team Registration Portal is a software. Existing computer hardware is used. The app is developed and a database is maintained.

5.4.5 Portability

VIT Team Registration Portal will be smart, precise and accurate. It will be easy to install and small in size. The device will be compatible with most of the PCs in today's market.

6. Gantt Chart



7. Conclusion

The VIT Team Registration Portal will provide an interface to make the team registrations during Gravitas and Riviera easier and less cumbersome. This system will be highly reliable, cost effective and extensive within the area of deployment. This platform will be available for every user interface. This will greatly reduce the work load of the organisers and coordinators. This SRS will help the software engineers to fulfill the basic requirements of the project.

Appendix A: Glossary

SRS – Software Requirements Specification
VTRP – VIT Team Registration Portal
Subjective satisfaction – The overall satisfaction of the system
End users – The people who will be actually using the product