Software Requirements Specification

for

Complaint Management System

Version 1.0 approved

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DATE – 13 SEPT 2016

1. Introduction

1.1 Purpose

This is version 1.0 Software Requirenment Specfication FILE (IEEE standard). The purpose of this file is the brief overview of the components and methodologies used for making online rating and complaint system for NIIT University. The scope of this project is only vast enough to cover all the services provided by NIIT University because every organisation has its own way of working and processing tasks. Further devlopment may be done on the file and project to entend its functionality but it cannot be used for other organisation.

1.2 Document Conventions (Improvement Need)

Text *   further clarification over text if needed

Text   important terms

SRS   software Requirenment Specfication

UML   Unified Modelling Language.

OP   Original Poster

1.3 Intended Audience and Reading Suggestions

This document is specifically intended for people specifically related to devlopment of this project such as developers, project leader, penetration tester and managers . Basically all the people related to devlopment of the project from the scratch or those willing to add more features to the project. The file is intended to be read from the top to bottom with skipping any particular part .

1.4 Product Scope

The product is specifically devloped for the purpose of collecting comments , reviews and suggestions regarding certain services provided by the university such as laundry, mess,Library, General Stores (HOD, Tuck Shop, TMP, Apno Gaon), E-Services (Moodle, ERP), Sports Services (list to be devloped further) and send them to the reportworthy entity so, further actions can be taken as desired by authorities. It will contain a messaging service in which the authority can give reply to a OP regarding his/her complaint.

It will be highly benifitial for the university as it will to an entend improve the quality of the services by removing the communication barrier among authorities and students. The major objective behind this project is to create an imvironment in which any student will have a solution to his/her problems with the university services or at least a reason for it. On completion it will be put to full effort to deploy it on university servers to provide easy accesibility and security.

A certain survey was done in which this idea and basic functionalities were described to everyone taking survey and questions and suggestios were asked. The

final result after the feasibility analysis and survey is:

We got 55 responses in total and mostly are positive, and only one negative response with the explanation that the size of target audience is small and the project is not generalized.

Some of the important suggestion:

- *if someone gives low rating to a service, there should be an option for them to provide reason or suggestion about what can be improved.*

- *how will u ensure that this rating is seen by corresponding department heads & our dean student affairs so that services can be improved.*

- *the ratings should be reviewed from time to time and if average rating below. The service should be looked into asap.*

- *You people should give anonymity to the user who is giving the review for the particular service if the user doesn't want his identity to be revealed as anonymity is the best security for the user if he wants to tell the actual truth.*

1.5 References [Improvement Need]

1) This project is under the guidance of Prof. Amit Kumar, CSE Department NIIT University.

2)https://docs.google.com/spreadsheets/d/1jCc_GKTm4WWuRAlPRDQrx2cclIcSM XpUrm135U72b08/edit#gid=1797016161

2. Overall Description

2.1 Product Perspective

The product is new and old at the same time because it will be replacing a product with similar features that is "moodle review system" but would be more interactive and have a vast approach. The best part being the other users can also check the problems and transparancy would be introduced
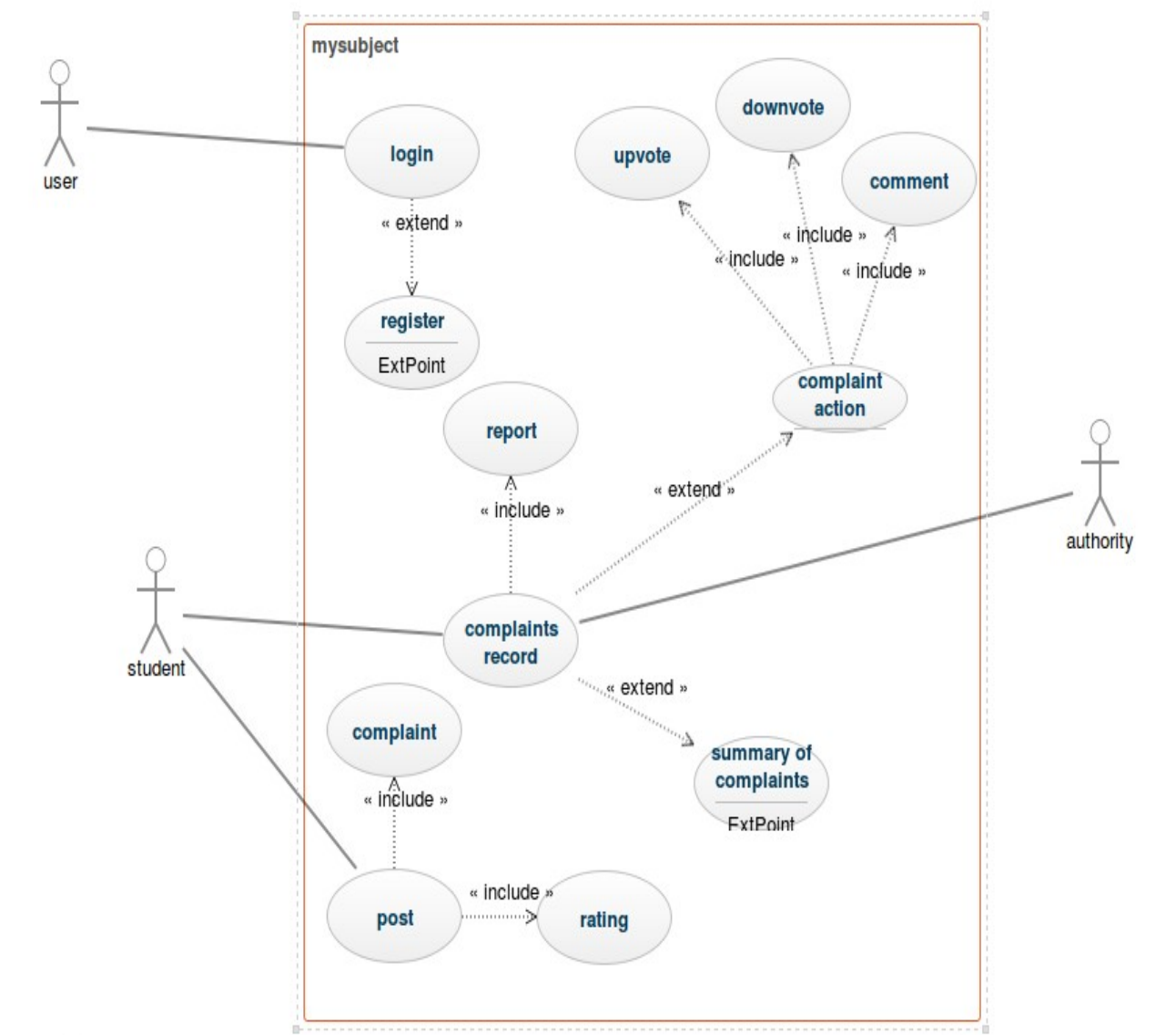
2.2 Product Functions

- Allow rating of various services.
- Allow review of services and facilities.
- Allow administrator to add/remove categories.
- Allow administrator to respond to complaints.

2.3 User Classes and Characteristics

2.4 Operating Environment

- Operating System
    - •Windows – xp or newer version
    - •Linux – any distribution and version of any distribution
    - •Mac – any version

- Hardware
    - Internet access hardwares – hub, switch, lan cables.
    - Server Computers – any computer with server software installed and free access.
- Software
    - Browser – any major browsers but micro browsers are capable such as safari, opera mini etc.

2.5 Design and Implementation Constraints

2.6 User Documentation

- Terms and contitions on the home page
- A how to use video when you sign up and at a easy click from main page

2.7 Assumptions and Dependencies

- It is assumed that all users and the administrator are part of the NIIT University directly or indirectly.
- It is assumed that the service would keep backup of all the mysql data in a diffrent computer.

2.8 Design and Implementation Constraints

- Only available in one language.
- Organization is responsible for maintenance.
- Source Code has to be altered to input new categories

3. External Interface Requirements

3.1 User Interfaces

3.1.1. **GUI** – All the interaction between the service and user will be done through buttons, input boxes, comment boxes, clicks, links and so on. All he does is give a predifined command, which will be carried out by the pre written codes and functionalities. So, the user don't need to care about how a feture is enabled, he only needs to know that is featue is enabled.
[IMAGES TO BE ADDED]

3.2 Hardware Interfaces

3.2.1. **computers with internet access** - Since the service will be setup on a http/https serve, user will need a computer (laptop, mobile, PC etc) with internet connectivity. In case any one is missing the service won't be accesable.
3.2.2. **firewall** – since security is one of our primarry concern, a hardware firewall will be setup to stop unwanted user to access the service. This helps in securing the service from DoS attack, DDoS attack and a firewall is also useful for allowing remote access to a private network through secure authentication certificates and logins.

3.3 Software Interfaces

3.3.1. **apache web server** – Since the service will be set on a server so, we need a software to run the server that deals with all the mysql connectivity and reuest/ reply work.
3.3.2. **mysql server** – It is nessary to keep all the user dand application data stored to be accesable when needed. The whole project depends upon sound coding of mysql scripts.
3.3.3. **web compiler** – The project is nothing but concisting of files which would be coded on a compiler or debugger for maintain flexibility of project.
3.3.4. **browser** – A user will need to browser which will take care of the interaction with server and run the files provided by server. Hence a browser will take care of all the port management, packet processing and socket programming.
3.3.5. **firewall** - A Software firewall for extra security (see 3.2.2).

3.4. Communications Interfaces

3.4.1. **http –** A standard authorized as standard for web services that are part of www.
3.4.2. **https –** Used for the same reason as http but is more secure to use.

4. System features

this system provide user with great sense of trust with features where two diffrent entities (student and the reportworthy authority) have better communication link. All the complaints would be better handled and be kept in easy reach of anyone would like to check. These services would be supplied to the user through the following features.

The system features are basically divided into two diffrent sets depending upon user interacts with those features such as students and authority.

Requirement ID	Name of Requirement	Short Description	Use Case ID
4.1	Secure Login and Register	this feature would take care of the authorization and authentication part of the service, no features of the service would be acceseble until some of theses processes are carried out. Also this feature is hence at highest priority as the security is highly dependent on how this feature is implimented in system.	UC-1
4.2	Review Rate Complain	this feature is the main core of the service, that would handling the central idea of student having the accesibility to provide	UC-2

		the feedback to the reportable authority. With being the main function of service it is having highest priority and is connection all other features in the flow chart of processes.	
4.3	upvote, downvote,comment	As all the complaints are to be dealt would be a long list. So, the save time all the recursion could be removed by allowing user to upvote any complaint or comment over it. So, the list would be shorter and more precise. Also helps check which problem concerns most of the users.	UC-3
4.4	complaint records	All the complaints in the recent time will be visible to all the user is descending order of upvotes(4.6). Also it makes all the users aware of the current situation with regards to university services. It will have priority after login and register processes.	UC-4

5. Other Nonfunctional Requirements

Requirenment id	Name of Requirement	Requirement
5.1	Performance Requirements	• Application Services and Technical support - Programmers and application developers will have access to source code to address bugs or system enhancements as deemed necessary. Network Administrator and DBA support is also required to maintain a 24x7 system uptime.
5.2	Safety Requirements	• Backup data storage – In case of any damage to the system servers, a backup facility will ensure that the service is back to work as soon as possible. • Printed code files – In case of future devlopment and use hard copy of the code is kept. This way any new person can understand the working model. And in case of any damage to the harware systems the

		service can be easly implimented again.
5.3	Safety Requirements	• Firewall- A firewall is needed to stop unwanted users or entities from accessing the service. A physical harware firewall is required rather than the softwares available. • Administration Features - System security and access levels are provided in the online system. There are varying levels of system access and functional authority. Each student's access is limited to his/her own registration records. Only authorized system administrator(s) has access to all student registration records. • Robot file – the robot .txt file ensures that the web service is safe from web crawlers. And this will take care of many scanning problems.
5.4	Software Quality Attributes	• Bug/ERROR report feature – Any time the service disfunctions report could be sent to the devlopment team to improve product . If it is a error report, it will be sent automatically but bug report could only be sent if the user desires.
5.5	Business Rules	• Student – is only provided the feature to rate , review and complain and only is his email id domain is niit university. • Authority – can read all the complaints sorted by a specific algorithm (to be completed) and decide wether or not to take action.

6. Other Requirements

6.1 Hardware Requirements

- **Network** - University network infrastructure (wired and wireless).
- **Server** – a server is needed to deploy the service. This server is accessed   to user service.
- Client Computers - Mac, Unix and Windows client computers.
- **Production support systems** -Web server computer(s) and related hardware support (back-up tapes, redundant drives, UPS, etc.).