

# **Software Requirements Specification**

**For**

**<Online notice board in CSE Department>**

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## Revision History

Name	Date	Reason For Changes	Version

# 1. Introduction

## 1.1 Purpose

The Online Notice Board System is intended for colleges and institutions where information and file sharing on regular basis plays vital role in the performance. The proposed system will act as an online notice board which will make use of the modern communication methodologies and techniques for information flow. The system is planned to consist of various useful features for the said purpose. The proposed system aims to create a platform for issuing notice, sharing information and files between the members of the institution. Different users shall have different level of access to the content. In the context of a college, there shall be four users of the software – administrator, student, teachers and guest. The administrator shall be able to issue notice, upload files, and view students' activities on the software. The teacher shall be able to issue notice, upload files (on a general basis or to a particular classroom), and view result and students' activities. The student shall be able to upload/download files, submit to faculty/teacher and view result. A guest will simply be able to view public notices.

## 1.2 Document Conventions

In today's world, everything is digitalized and paper is being used less and less every day. How often has it happened that we miss some important notice because we have to go to a wall and read the notice there? The Online Notice Board System is mainly intended for colleges and institutions where information and file sharing on regular basis plays vital role in the performance. The proposed system will act as an online notice board which will make use of the modern communication methodologies and techniques for information flow. The system is planned to consist of various useful features for the said purpose. The "Online Notice Board System" is a web- based software, with supplementary application software, that aims to aid the institutes by providing such digital noticeboard.

## 1.3 Intended Audience and Reading Suggestions

User	Type
Guest	Public User
Student	Restricted User
Teacher	Manager
Admin	Administrator (Super User)

Table 16-1 User Profile of the System

## **1.4 Product Scope**

The proposed system is currently mainly intended to be applied in educational institutes as an online noticeboard and file sharing system. Further applications of this system may include any type of office or business organizations where computers with working internet connection is available (which is pretty much every organization.)

## **1.5 References**

Feasibility Analysis Guide, Department of Computer Science and Engineering,  
Jahangirnagar University  
<http://www.juniv.edu/cse>

srs\_template-ieee [https://web.cs.dal.ca/~hawkey/3130/srs\\_template-ieee.doc](https://web.cs.dal.ca/~hawkey/3130/srs_template-ieee.doc)

<http://www.cmpe.boun.edu.tr/~akin/> IEEE Recommended Practice for Software Requirement Specifications, IEEE Standard 830–ISM4331 IEEE Recommended Practice for Software Design Descriptions, IEEE Standard 1016–1998

# **2. Overall Description**

## **2.1 Product Perspective**

The Online Notice Board System is intended for colleges and institutions where information and file sharing on regular basis plays vital role in the performance. The proposed system will act as an online notice board which will make use of the modern communication methodologies and techniques for information flow. The system is planned to consist of various useful features for the said purpose. The proposed system aims to create a platform for issuing notice, sharing information and files between the members of the institution. Different users shall have different level of access to the content. In the context of a college, there shall be four users of the software – administrator, student, teachers and guest. The administrator shall be able to issue notice, upload files, and view students' activities on the software. The teacher shall be able to issue notice, upload files (on a general basis or to a particular classroom), and view result and students' activities. The student shall be able to upload/download files, submit to faculty/teacher and view result. A guest will simply be able to view public notices.

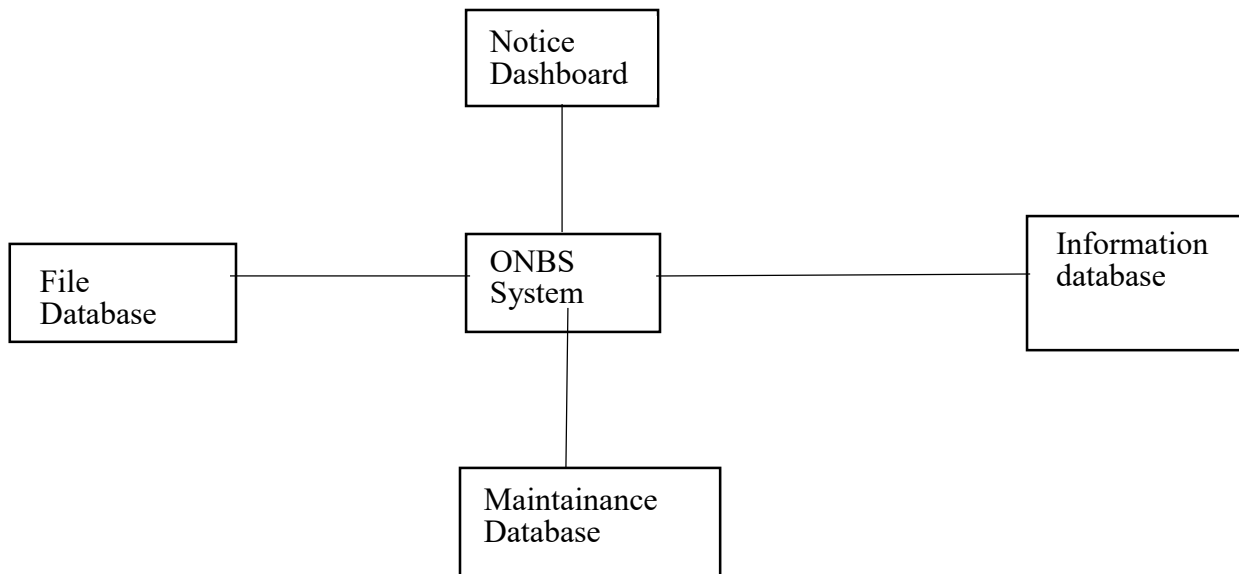


Figure : Bloch diagram of the system

## **2.2 Product Functions**

The system should meet the following functional requirements:

- The system should be able to manage and store notices and files.
- The system should provide appropriate UI for notice and file upload and download.
- The system should be able to recognize and authenticate several levels of users.
- The system should be able to manage and maintain a proper database.
- The system should be easily operable and user friendly.
- The apps should be able to work seamlessly with the web server.
- The apps should be able to provide push messaging in real time, whenever available.

## **2.3 User Classes and Characteristics**

### **Use Case Analysis**

Actor Action Login Pre-condition Post Condition Alternative Action Should have a Will get access Reset username and password valid to the Online username and Notice Board User Registration password System the notice will be displayed and pushed to the mobile system the size of the file will be file should not uploaded to the Prompt message will be displayed overflow database

Student

Post Notice

Upload File View Notice

Login

Should have a valid username and password

Teacher

Post Notice

Upload File View Notice

the size of the file should not overflow

Will get access to the Online Notice Board System the notice will be displayed and pushed to the mobile system file will be uploaded to the database

Reset username and password User Registration

Prompt message will be displayed

Login

Should have a valid username and password

Post Notice Admin Upload File View Notice Monitor work Guest View Notice the size of the file should not overflow

Will get access to the Online Notice Board System the notice will be displayed and pushed to the mobile system file will be uploaded to the database

Reset username and password User Registration

Prompt message will be displayed

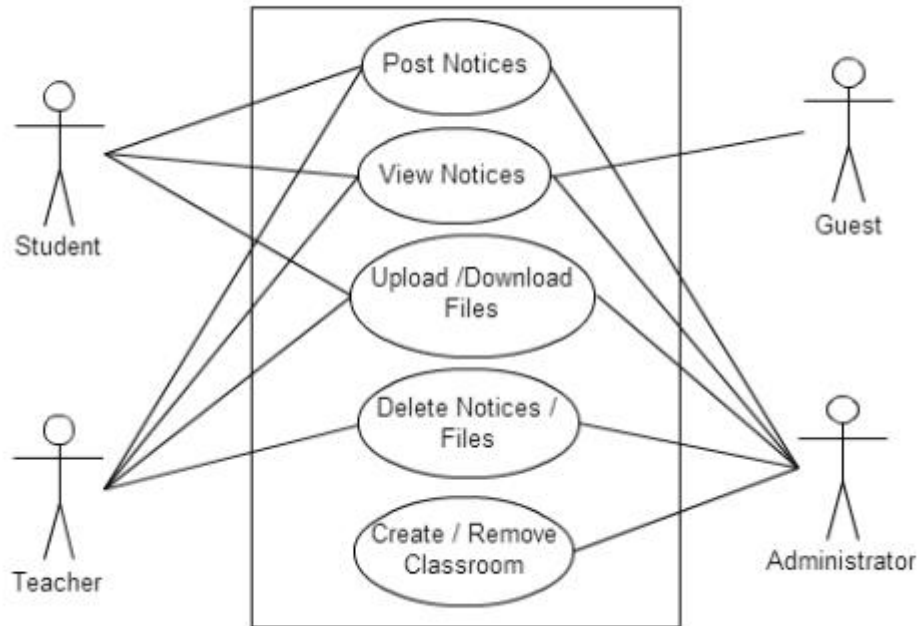


Figure: Use case diagram

Actor	Action	Pre-condition	Post Condition	Alternative Action
Student	Login	Should have a valid username and password	Will get access to the Online Notice Board System	Reset username and password User Registration
	Post Notice		the notice will be displayed and pushed to the mobile system	
	Upload File	the size of the file should not overflow	file will be uploaded to the database	Prompt message will be displayed
	View Notice			
Teacher	Login	Should have a valid username and password	Will get access to the Online Notice Board System	Reset username and password User Registration
	Post Notice		the notice will be displayed and pushed to the mobile system	
	Upload File	the size of the file should not overflow	file will be uploaded to the database	Prompt message will be displayed
	View Notice			
Admin	Login	Should have a valid username and password	Will get access to the Online Notice Board System	Reset username and password User Registration
	Post Notice		the notice will be displayed and pushed to the mobile system	
	Upload File	the size of the file should not overflow	file will be uploaded to the database	Prompt message will be displayed
	View Notice			
	Monitor work			
Guest	View Notice			

## 2.4 Project Environment

- Programming Languages and scripts
  - Web Application: PHP and CSS
  - Windows 8 App: C# and XAML
  - Android App: Java



- OperatingSystem
  - Web Application: Any current OS
  - Windows 8 App:Windows®8, Windows® 8 Phone
  - Android App:Android™OS
- Database–MySQL

## **2.4 Design and Implementation Constraints**

This project will teach us the practical implementation of object-oriented programming. Moreover, this will also provide us first-hand experience about several important fields of a Computer Engineer, like Web Development and Application Development. It will also help us learn programming languages like C# and Java, webdevelopment scripts like PHP, XAML and CSS and DBMS like MySQL. Apart from these, we strongly believe going through this project will make us more competent for similar future tasks and enhance our technical and other abilities.

- **Problem Statement**

In today's world, everything is digitalized and paper is being used less and less every day. How often has it happened that we miss some important notice because we have to go to a wall and read the notice there? There are dedicated file hosting sites and clouds used by some institutions, but there is a definite need for a dedicated noticeboard system. The proposed system is such a system.
- **Need**

Almost all leading institutions, excepting a few, currently lack an electronic noticeboard system. Though some have taken the aid of third-party websites like Facebook® to interact, it comes at the cost of mixing one's social life with professional. Keeping this in mind, educational institutes will find this software extremely useful. The "Online Notice Board System" is a web- based software, with supplementary application software, that aims to aid the institutes by providing such digital noticeboard

## **2.5 User Documentation**

### **Hardware Interfaces**

The system will interact with the hardware resources of the system on which it is running. While any system will support the core software, a device with push messaging facility is recommended for Windows 8™ or Android™ app.

### **Software Interfaces**

Only Windows 8™ and Android™ OS will support this software's apps. It will have the most interaction with an external database server. It may also be integrated with other systems like Employee Management System and/or Student Management System.

## **3. External Interface Requirements**

### **3.1 User Interfaces**

The system will start with a login page to identify the user level and the features will be available accordingly. The application will have easily accessible buttons for all major activities of the software. Key features and recent events will be highlighted to attract user attention.

### **3.2 Hardware Interfaces**

The system will interact with the hardware resources of the system on which it is running. While any system will support the core software, a device with push messaging facility is recommended for Windows 8™ or Android™ app .

### **3.3 Software Interfaces**

Only Windows 8™ and Android™ OS will support this software's apps. It will have the most interaction with an external database server. It may also be integrated with other systems like Employee Management System and/or Student Management System

### **3.4 Communications Interfaces**

An active internet connection will be required for the functioning of the software. In case of the mobile apps, an internet connection will then allow the software to connect to the online database. The system will use the Hyper Text Transfer Protocol (HTTP) to transmit data

## **4. System Features**

### **4.1 File Sharing**

#### **Description:**

This will allow primary users to share files. These files may range from simple text or image notices to files of other formats. The pre-loaded notices and files could be accessed without an internet connection.

#### **Stimulus/Response Sequences:**

Files can be downloaded by clicking a single download button which triggers the download event. Any file to be uploaded can be browsed and then uploaded using another button event.

#### **Functional Requirements:**

REQ-1: Access to the internet REQ-2: Required user

## **4.2 Push Messaging**

### **Description and Priority:**

The system shall notify the primary users with recent notices and events with an automated message in their mobile phones or computers.

### **Stimulus/Response Sequences:**

A change in the value in the database, caused by a user uploading a notice from his client side, will trigger an event which in turns triggers the push messaging event across all users who are set to receive push message for that particular notice and/or uploading user in question.

### **Functional Requirements:**

REQ-1: Access to the Internet REQ-2: Push Messaging Supporting Device REQ-3: Proper user authentication

## **4.3 Database and UI Auto-Update**

### **Description and Priority:**

The system shall auto update its database. Recently posted notices and events as well as prioritized files shall be focused while outdated notices and files shall be cleaned up to make memory space available for new posts.

### **Stimulus/Response Sequences:**

Any notice uploaded by any of the users triggers an event to append it to the database and update the UI accordingly across all the clients with users of the same class.

### **Functional Requirements:**

REQ-1: Access to the internet REQ-2: Proper User Authentication  
REQ-3: An easy and flexible database management system

## **5. Other Nonfunctional Requirements**

### **5.1 Performance Requirements**

The system in itself does not require anything specific for basic operation, but the complete software with all its components running may have some performance requirements. Except viewing pre-loaded notices and files (in mobile apps), an internet connection is needed for the features of the system to become available.

## **5.2 Safety Requirements**

Major attention should be given to the safety and security of the data and information that are stored in the software. The database must be trustworthy and non-leakage to ensure no data loss occurs.

## **5.3 Security Requirements**

User authentication must be absolute and non-by-passable. No user should be able to access the software without providing proper authentication. In case of guest users, only public notices and events should be visible. Also, the IP address of the client machine can be recorded for future follow up of any security issues that may arise.

## **5.4 Software Quality Attributes**

Several additional qualities and characteristics of the system will be important to the client and/or the developers, like correctness, maintainability, portability, testability and usability. For correctness, proper care and attention should be given during the design and coding from both developers and customer (should correct some false and unwanted features) side. Usability is achieved by developing the product as user friendly as possible. Similarly, maintainability and testability plays vital role in the long life of the software

# **6. Other Requirements**

**The system should meet the following functional requirements:**

The system should be able to manage and store notices and files. The system should provide appropriate UI for notice and file upload and download. The system should be able to recognize and authenticate several levels of users. The system should be able to manage and maintain a proper database. The system should be easily operable and user friendly. The apps should be able to work seamlessly with the web server. The apps should be able to provide push messaging in real time, whenever available.