**Software Requirements Specification**

**for**

**NU Exhibition portal**

**Version 1.0**

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**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

**1.Introduction**

**1.1 Purpose**

The purpose of this document is to specify the working and features of the Web application- NU exhibition portal. This document provides details regarding the features of the product , how it will behave in external stimuli and what is the interface for the user. The document will be sent for further approval to the concerned authorities.

**1.2 Document Conventions**

Main Section Titles

* Font: Times
* Face: Bold
* Size: 18

Sub Section Titles

* Font: Times
* Face: Bold
* Size: 14

Other Text Explanations

* Font: Arial
* Face: Normal
* Size: 11

**1.3 Intended Audience and Reading Suggestions**

* **Admins-**The document is intended for the admins maintaining the software so that they can understand how the portal works.
* **Developer**-The developers and the designing team to understand each others requirements in detail.
* **Student**-If the portal is further developed then the students can use this as a base.
* **NU-**This portal is a platform for students and faculties of NU to showcase their talents.

**1.4 Product Scope**

This portal provides students and faculties a great platform to showcase their talents and gives exposure to the outside world which will be easy to use.The portal gives information about the research work and its authors as well as the creators of the art works and photograph to be showcased. We hope to provide best user experience and a forum for improvement and suggestion for the creators.

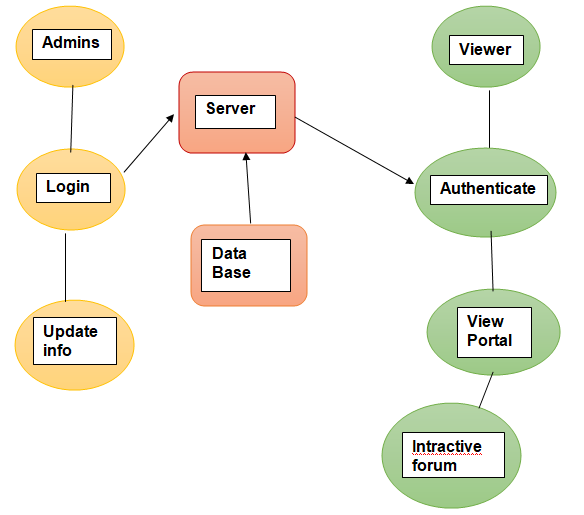
**1.5 References**

* <http://user.ceng.metu.edu.tr/~e1679216/documents/SRS.pdf>
* <https://www.cse.msu.edu/~cse435/Handouts/SRSExample-webapp.doc>
* IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

**2.Overall Description**

**2.1 Product Perspective**

This portal is a new, standalone project but it can be further included in NIIT university official website. The website provides information about NIIT university and this portal will provide more information as well as an interactive platform for the visitors of NU ‘s website, if included*.*



**2.2 Product Functions**

The web app has-

* Details of the event like time,date,venue,map showing the location and the details of the speakers of the event.
* Images from the Annual lecture, showcasing Events like Vividha Art exhibition,Photography club exhibition and the users can give ratings for each artwork or photograph as well as give reviews.
* Information about the various research being conducted in NU and the description about it like authors.Again users can give their feedback,ratings and suggestions.

**2.3 User Classes and Characteristics**

* **Viewers / Users of portal**

The viewers of the portal require minimum technical skills which is using a web browser.They will not be able to modify the pictures or upload them but will be able to give opinions and suggestions. Satisfaction of the user is very important.

* **Administrators**

The Admins will maintain and update the system. They will deal with updation of the content and details of the events. Require technical knowledge of website functioning.

**2.4 Operating Environment**

* Hardware Requirements-The webapp can be accessed via mobile or laptops.
* Software Requirements-The web application can be viewed in systems with active internet connections and with latest web browsers such as Mozilla firefox and Google chrome.

**2.5 Design and Implementation Constraints**

The developers will have to choose wisely the database used for the platform because data will be huge and implementing the interactive discussion platform might be a challenge. The admins maintaining the system might have to get comfortable with the tools used by the developers .

**2.6 User Documentation**

The product is under development and requires further prototyping to specify the user documentation.

**2.7 Assumptions and Dependencies**

* The browser must be upto date.
* There should be proper Internet connection.
* The users must have email for authentication.
* The admins should be familiar with the constraints for using the web app like image format.

**3.External Interface Requirements**

**3.1 User Interfaces**

* *Introduction page*-Main page from which user can navigate to all other pages.
* *Event page*-Provides description about the event.
* *Vividha page*-Page showcasing Vividha Art Club Exhibition along with interactive forum to provide ratings,feedbacks and suggestions.
* *NU Instills page*-Page showcasing Photography Club Exhibition along with interactive forum to provide ratings,feedbacks and suggestions.
* *Login page*-User needs to login before providing the feedback,ratings and suggestions.
* *Signup page*-Page for unauthorized users to signup.

**3.2 Hardware Interfaces**

* Standard devices being used with current web applications like mouse, stylus will be supported.
* The web-app can be viewed on Desktop, laptop and smartphones.

**3.3 Software Interfaces**

Following are the software used for the NU Exhibition WebApp*:*

|  |  |
| --- | --- |
| **Software used** | **Description** |
| Github | VCS |
| MySQL | Database |
| Netbeans(HTML,CSS,Bootstrap) | front-end |
| Netbeans(Laravel) | Back-end |

**3.4 Communications Interfaces**

Users will require up to date web browsers for accessing the portal..For sign up purposes users will require to provide email ids**.**  The developers will be using Github for communication .

**4.System Features**

This section outlines the use case for various actors which includes admins and user.The admin can be of three fields: art,photography and research.

**4.1 Use Case: View Content**

**4.1.1 Description and Priority**

User wants to view all the content of the portal

**4.1.2Stimulus/Response sequence**

Before this use case can be initiated, the User has already accessed the NU Exhibition Portal.

* User access the first page of the web app.
* User chooses any one of the four thumbnails.
* User views the content.

**4.1.3 Functional requirement**

* The user can view the content of the web app

**Diagram:**

VIEW CONTENT

USER

**4.2 Use Case- Provide suggestion and feedback**

**4.2.1 Description and priority**

User wants to write suggestions or feedback.

**4.2.2Stimulus/Response sequence**

* The user chooses any one of the thumbnails on the first page.
* User starts viewing the content.
* User authenticates via email id and password.
* User gives the ratings, suggestions and feedback.

**4.2.3 Functional requirement**

* User must be logged in.

**Diagram:**

PROVIDE SUGGESTION AND FEEDBACK

USER

**4.3Use Case-Login**

**4.3.1 Description and priority**

This product allows to log in the system

**4.3.2 Stimulus/Response sequence**

* The Admin opens the web portal.
* The Admin has to login via proper login information.
* Now, the Admin can do the necessary actions.

**4.3.3 Functional requirement**

* User must be registered.

**Diagram:**

FAILED

VALID

LOGIN

ADMIN

ACCEPTED

**4.4Use Case: Publish Content**

**4.4.1 Description and priority**

* Product will be used via a web browser.
* Each user will have his own workspace and can upload his content

**4.4.2 Stimulus/Response sequence**

* User logins into system and opens his workplace.
* He adds(publish) his work or content.
* The system will store the information of his work in the database.

**4.4.3 Functional requirement**

* He must be logged in to the server to access his workspace.

**Diagram:**

PUBLISH CONTENT

ADMIN

* 1. **Use Case**: **Update Content**

**4.5.1 Description and priority**

The Admin can remove or make necessary changes.

**4.5.2 Stimulus/Response sequence**

* User logins into the system
* Opens his workplace
* Deleteor updatehis work.
* Updates are stored in the database.

**4.5.3 Functional requirement**

* He must be logged in to the server to access his workspace.

**Diagram:**

UPDATE CONTENT

ADMIN

**4.6Use Case: View suggestions, ratings and feedbacks**

**4.6.1 Description and priority**

* The Admin can view the suggestions, feedbacks and ratings given by the users.

**4.6.2 Stimulus/Response sequence**

* User logins in the system and opens his workplace.
* The user gives suggestions, ratings or feedbacks for works.
* Content is stored.

**4.6.3 Functional requirement**

* You must be logged in the system

**Diagram:**

VIEW SUGGESTION AND RATINGS

ADMIN

**USE CASE DIAGRAM:**

VIEW CONTENT

PROVIDE SUGGESTION AND FEEDBACK

UPDATE PHOTO

PUBLISH CONTENT

VIVIDHA

INSTILS

RESEARCH

EVENT

LOGIN

VIEW SUGGESTION AND RATINGS

ADMIN

USER

<<include>>

<<include>>

<<include>>

**5.Other Non-functional Requirements**

**5.1 Performance Requirements**

* Since this software is going to web – based, it does require a powerful server machine with high band internet access.
* Bandwidth Calculation scheme to be used-

**Bandwidth needed = Average Page Views x Average Page Size x Average Daily Visitors x Number of days in a month (30) x Redundant Factor**

* Average Daily Visitors: The total number of monthly visitors/30.
* Average Page Size: The average size of your web page.
* Average Page Views: The average page viewed per visitors.
* Redundant Factor: A safety factor ranged from 1.3 – 1.8.
* Another performance requirement is the storage space.Higher storage space means more user and bigger workspace per user so higher the storage, better the performance.

The storage space for this should be 30GB(approximately).

* Performance requirement by the user side is, web application should be developed as a lightweight web app so that it can work on almost any platform even with slower internet connections.
* Expected number of simultaneous user should be at least 50. System should be able to deal with 50 users at the same time. Also database of the system should handle at least a 100 of users at any period.

**5.2 Safety Requirements**

* If proper Login and authentication is not done, the content of the web app might be compromised by the viewers of the webapp.
* Proper Authentication required on user and admin side.
* Captcha system to ensure no robots.

**5.3 Security Requirements**

* Product should ensure 100% security.
* Only the valid users are using the web app to give suggestions and feedback, so authentication via an email account is necessary for user side.
* For Admin side, product must ensure that right Admins upload content on right pages.This will be achieved via Admin login credentials.

The web security testing will include the following aspects-

* Password quality rules
* Session cookies
* User authorization processes
* SQL injection

Software used TBD.

**5.4 Software Quality Attributes**

1.Reliability - The product should have a 90% reliability.

2. Usability- The portal can be added to NU’s website.

3. Security- The web app should be 100% secure.

4. Availability- The web app should be available 100% on all platforms and at all times.

5. Scalability- The product should be scalable to accommodate 100% of NU’s official website.

6. Maintainability- The updates for maintainability should be available to the users.

7. Performance- The web app should not be too slow. Performance rate should be 95%.

**5.5 Business Rules**

* The permission to update the content of the web app is restricted only to the admins.
* The permission to give suggestions, feedbacks and ratings should be restricted to users.

**Appendix A: Glossary**

* VCS:Version Control System
* HTML:Hyper Text Markup Language
* CSS:Cascading Style Sheet
* Database: Collection of all the information monitored by this system.
* User: The one who interacts with the web app.
* Art Admin: The person who reviews and publishes art.
* Photography Admin: The person who reviews and publishes photographs.
* Research Admin: Person who receives research papers, sends them for review, and makes final judgments for publications.

**Appendix B: To Be Determined List**

* User documentation.