



Name: Muhammad Abdullah Abbasi
Abdullah Zahid

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01-131202-036

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Submitted to: Mam Rafia Hasan

Assignment No: 01

Web Engineering

BAHRIA UNIVERSITY ISLAMABAD CAMPUS

Project Name:

"Web Portal of University integrated with QMS (Quiz Management System)"

Project Description:

Part a) Web portal of university

Part b) Admission Portal (for students & staff)

Part c) Login (as a student && as a faculty member)

Part d) Quiz Management system

- Faculty member uploads the quiz
- Student views, solves and submits the quiz

Stakeholders:**Users:**

- Staff Member
- Faculty Member
- Student

Developer:

- Admin

Identification of Requirements:

Data Requirements:

Necessary functions performed by the website:

1. Allow Admissions
 - Students
 - Staff
 - Faculty members
2. Allow Login/Logout
 - Students
 - Faculty members
3. Allow quiz uploading (by faculty members)
4. Allow quiz submission (by students)

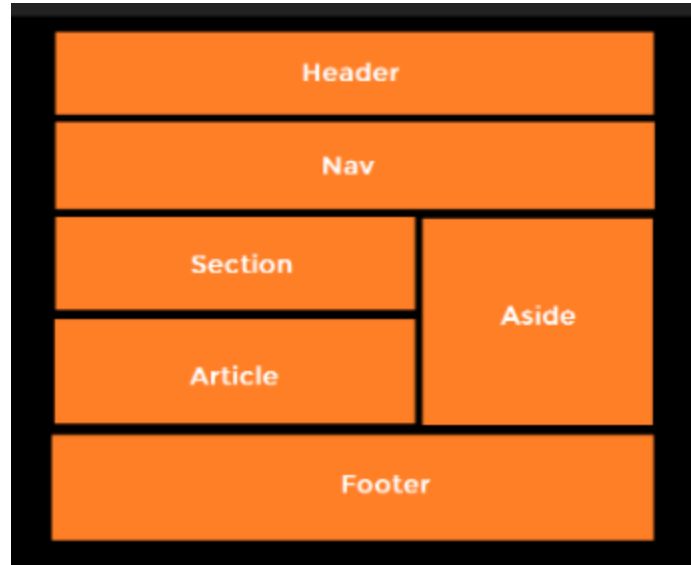
Necessary functions performed by different users:

- Students
 1. Open/ Fill and Upload Admission form
 2. Login the QMS
 3. View Quiz
 4. Solve Quiz
 5. Submit Quiz
 6. Check Marks of Quiz
 7. Logout the QMS
- Faculty Members
 1. Open/ Fill and Upload Job Admission form
 2. Login the QMS
 3. Upload Quiz
 4. Upload Quiz Marks
 5. Logout the QMS
- Staff Members
 1. Open/ Fill and Upload Job Admission form

Interface Requirements:

Interface requirements includes:

- Proper arrangement of every section on the page



- The website is responsive
- Proper visualization of every item on screen which is very easy for novice user to understand
 - Included search bar
 - Included name of university in header
 - Defined content in middle of page
 - Defined proper headings
 - Interactive interface
 - Hover property added



Navigational Requirements:

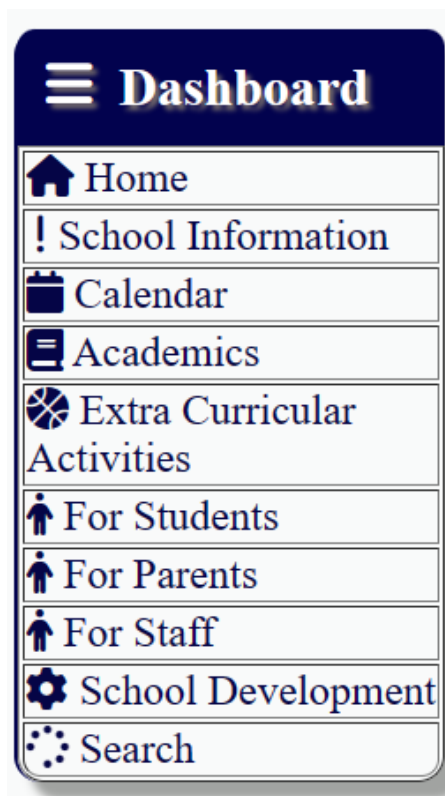
The navigational bar of our first page is shown below:



The requirements for necessary navigation are:

- User are able to go to any page when they press on any link in navigational bar
- User are able to navigate to admissions page when pressed on Admissions text or home icon as shown in figure
- Users are enabled to choose from a small selection of pages to visit.
- Users are provide clear labels for the pages where navigation tabs takes user
- Adapted our website to match user needs
- Provided them with a search button
- Provided with the information of pages to users where they currently are and how to get back

Our project also includes an aside column for navigation, which would also provide navigation to different sections as well as pages



Personalization Requirements:

- New and existing user finds a difference while visiting the website

For example:

Links colors are changed from blue to purple, so new user will experience a blue color on links whenever visits the website, but the existing user will know that the links with purple color have already been visited by him/her

- New and existing users will be greeted and treated differently

For example:

The user who has already taken an admission in university as a student, he won't be allowed again to take admission at the same time from same name, email and other credentials, whereas the new user will be most welcomed to fill and submit the admission form

Transactional Requirements:

- **Atomicity**

Quiz will uploaded by a teacher, then solved and submitted back by student, has no overall effect on anything because the number of MCQs before and after submission remain the same

- **Consistency**

User cannot write numbers into the name as well as user cannot write characters into the phone number

- **Isolation**

Multiple students can solve and submit quiz at a time, irrespective of each other without any interference

- **Durability**

Student taking admission and submitting commits that his/her data will exist in university records permanently, it won't be deleted under normal circumstances

Some functions that are not necessary, but can enhance the usage:

The website should be secure enough, it should not steal anyone's data whenever someone logs in to the system or accesses the system.

The website should not have an access to the hard disk without the permissions of the user.

Additionally, the website should keep the password of the login website safe.

The website should be responsive in such a way that any type of device user should easily use it. For example, mobile phone users and tablet users and different screen users should easily use it.

The website should respond quickly to the commands.

There should not occur such situation like "you cannot upload the quiz due to low storage", there should be no capacity and storage problem.

The probability of failure should be zero, because this kind of website that is to be used for the educational purposes should not crash or hang.

The website should be localized for its users anywhere they are located.

Navigation should be efficient enough for the users to navigate from one page to another or one content to another.

The design and features should be easy enough to use for the users that they can easily understand and determine what a feature is and what it can do.

Ways to evaluate NFR's:

- Assess user expectations
- Recognize the market demand
- Analyze the performance

Functional Requirements of Project:

Following are the main functionalities that our project is going to perform:

- Admission form filling and submission
- Logging in and Logging out to the QMS
- Uploading / Viewing / Solving and Submitting the quiz

Non-Functional Requirements:

- **Responsive**
 - The website should be responsive in such a way that any type of device user should easily use it. For example, mobile phone users and tablet users and different screen users should easily use it.
 - The website should respond quickly to the commands.
- **Security**
 - The website would be secure enough, it should not steal anyone's data whenever someone logs in to the system or accesses the system.
 - The website would not have an access to the hard disk without the permissions of the user.
 - Additionally, the website would keep the password of the login website safe
- **Speed**
 - The website should respond quickly to the commands.
- **Capacity**
 - There should not occur such situation like "you cannot upload the quiz due to low storage", there should be no capacity and storage problem.
- **Usability**
 - The design and features should be easy enough to use for the users that they can easily understand and determine what a feature is and what it can do.
- **Localization**
 - The website should be localized for its users anywhere they are located.
- **Reliability**
 - The probability of failure would be zero, because this kind of website that is to be used for the educational purposes should not crash or hang.
- **Navigation**
 - Navigation would be efficient enough for the users to navigate from one page to another or one content to another.

Use Case Diagram:

