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Group Project SRS Document

(Research Project Management Tool)

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1.0. Introduction

1.1. Purpose

The research project management tool gives you the ability to easily create a set of tasks so that you can complete them effectively and efficiently. It also allows you to indicate which steps are in sequence and which tasks are dependent on each other. Next, this makes it easier for the team to do its job.

While it maintains strategic resilience, project management can help reduce wasted effort, track progress and respond quickly to deviations from important goals.

1.2. Scope of Project

Research is a scientific program that relies heavily on the use of tools as it allows researchers to complete tasks faster. A Research Project Management Tool is a set of tasks that facilitates the successful implementation of a project, in which a project can be defined as involving a group of related tasks that are planned and executed in order to create a unique result (product or service) over a period of time. We can really reduce the amount of time we spend reproducing what someone else has already done.

This tool helps users to see a broader project concept, Easy Planning, which allows users to create and complete tasks, meet deadlines, capture rich notes with details, and provide templates, Share Documents, and Contacts. Consider this project management tool useful as it supports the storage and editing of various documents. This is very important as most projects have a high number of documents. By building a central document storage system, all relevant users can easily, and quickly, organize and contribute. This feature is especially important in situations where the work is assigned to an individual or group. It is very easy to do all the necessary work without sending thousands of emails with attachments when, sooner or later, things become convoluted.

These are some of the most important reasons why we want to rely on the research project management tool. Utilizing the latest technology currently available enhances project performance. Every workflow is improving, as people are able to participate in a variety of activities and that is what we want to achieve. Rely on the research project management tool to do this perfectly.

1.3. Glossary

Term	Definition
Admin	A user who can create submission types & marking schemes, delete & update users, allocate panel members to student groups and upload documents.
Student	A user who can create groups, submit documents, download templates, and request supervisor/co-supervisor.
Staff	A user who can Register staff members.
Supervisor/Co-supervisor (Staff)	A Sub user who can chat with groups, evaluate documents, Accept topics.
Panel Member (Staff)	A Sub user who can evaluate topics, evaluate student presentations.

Table 1 : Glossary

1.4. Overview of Document

The next chapter, the Overall Description section, of this document provides an overview of product performance. It describes the informal requirements and is used to establish the context for clarifying technical requirements in the next chapter. The third chapter, the needs the Requirements specification section, is written primarily for developers and explains the technical terms of product performance. Both sections of the document describe the same software product as a whole but are intended for different audiences and thus use a different language.

2.0. Overall Description

2.1. Product Perspective

In the “Research Project Management Tool System”, we will be having a user interface for the admin, student and Staff .The user can log in to their account. Depending on the user, the utilities will be decided. The student can login to their respective account and can create student groups. If the user don’t have an account then he/she can create an account. The staff can login to their account and can act as a Supervisor / Co-Supervisor, Panel Member. If the staff don’t have an account the admin can create and account and can update the delete user. Admin will already be having an ID and password. The admin will login and manage the student and staff activities. After the creation or the login of the user, a successful message will be displayed to the user.

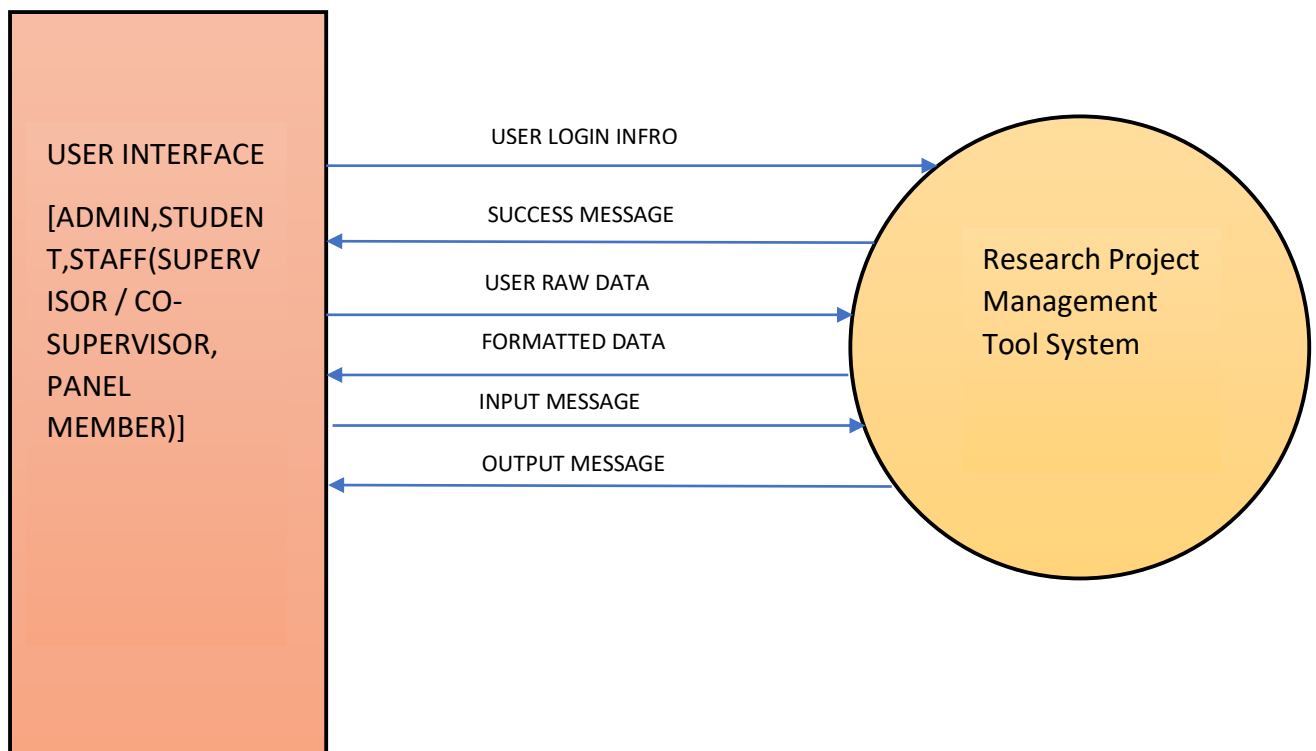


Figure 1: Product Perspective

2.2. System Environment

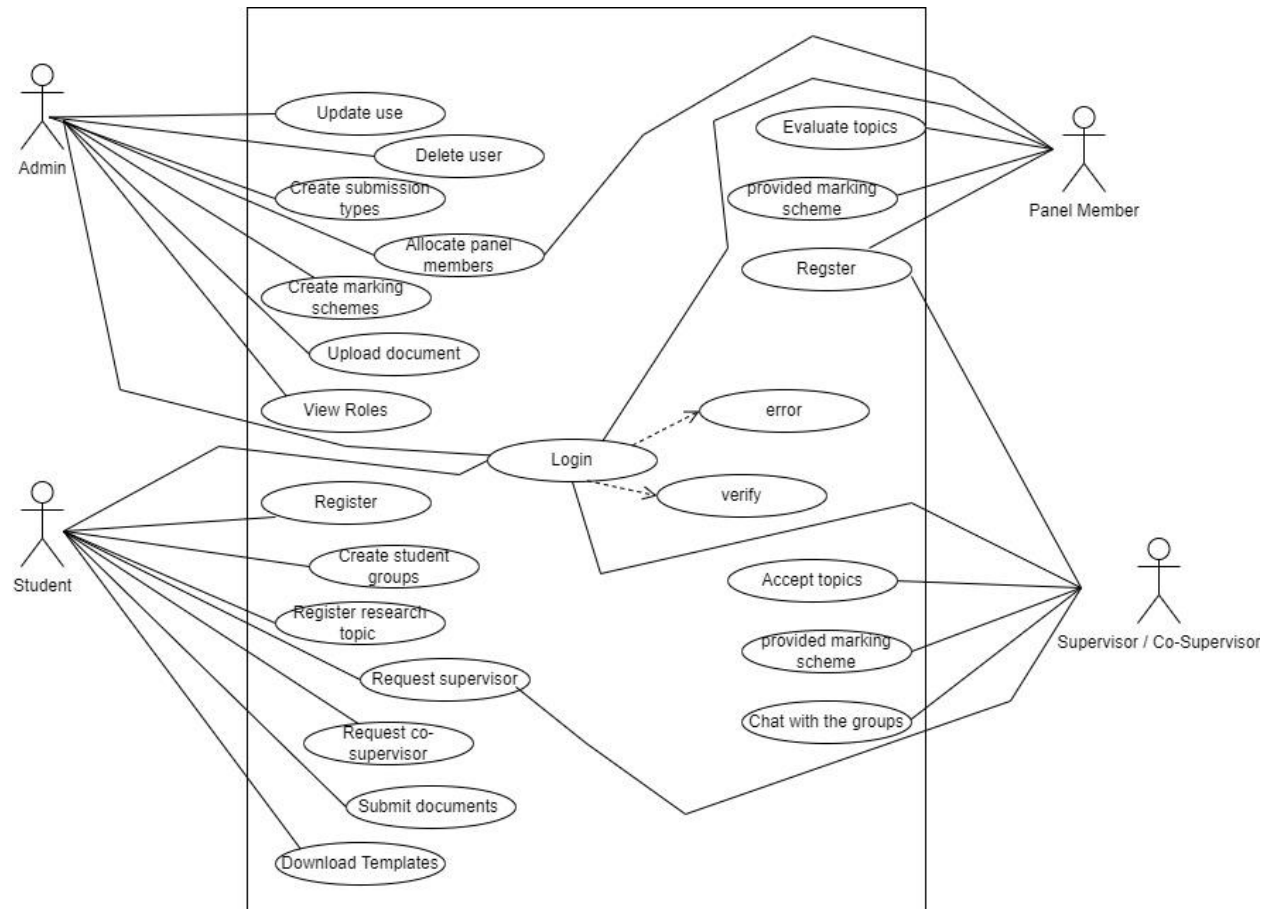


Figure 2 : System Environment

The Research Project Management Tool has four main active Actors. The admin, Student, Supervisor / Co-Supervisor and Panel Member. The Student basically logs into the application and Submit documents the Supervisor / Co-Supervisor and Panel Member can log into the application and review this file uploaded by the student and comment or enter marks on the same accordingly.

2.3. Functional Requirements Specification

2.3.1. Admin Use Case

Use case: Admin

Diagram:

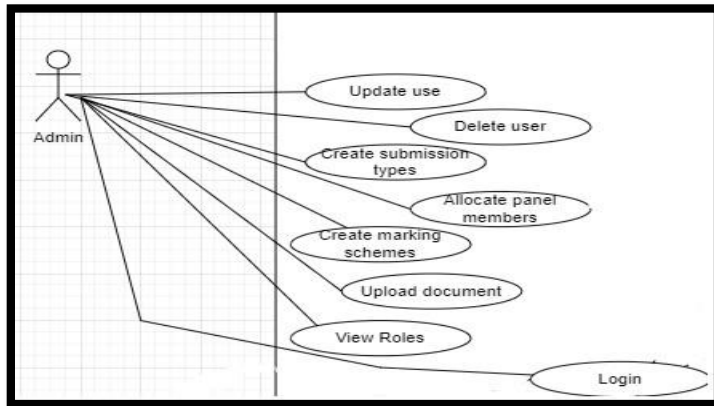


Figure 3: Admin Use Case

Brief Description

The Admin accesses the system by logging into the application by entering his credentials. He create submission types to the students. He can view the files uploaded by the Teacher and Student and also upload files. He allocate panel members to student groups. He can delete/update users. He also create marking schemes and uploads marks. The Admin can add Upload document/presentation templates the system.

Initial Step-By-Step Description

- The Admin will login into the system by entering his credentials.
- The Admin will delete/update users.
- The Admin will panel members to student groups
- The Admin can upload document/presentation templates.
- The Admin will create marking schemes, review the files and mark the students accordingly.
- The Admin can View Roles

2.3.2. Student Use Case

Use case: Student

Diagram:

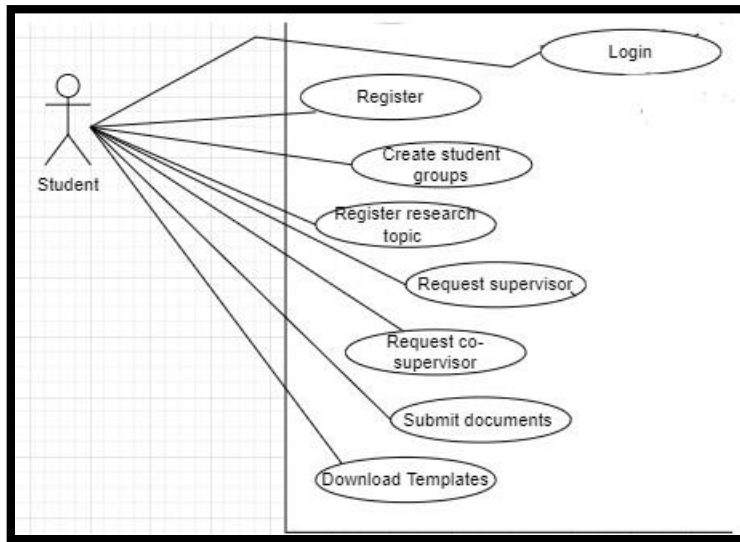


Figure 4: Student Use Case

Brief Description

First, student must register to the system. Then the Student accesses by logging into the application by entering his credentials. After he Register to the research topic, he Request supervisor, co-supervisor. He can view the files uploaded by the Admin and Download Templates. He can submit documents.

Initial Step-By-Step Description

- The Student will register to the system.
- The Student will log into the application by entering his credentials.
- The application will verify or will show error if the entered credentials are incorrect.
- The Student will register to the research topic.
- The Student will request supervisor, co-supervisor.
- He can view the files uploaded by the Admin
- He can submit documents.
- He can also view his marks.

2.2.3. Supervisor / Co-Supervisor Use Case

Use case: Supervisor / Co-Supervisor

Diagram:

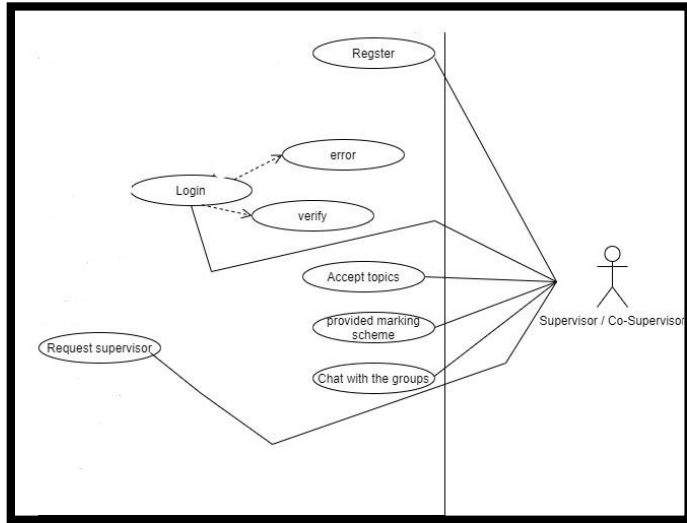


Figure 5: Supervisor / Co-Supervisor Use Case

Brief Description

First he must register to the system as a staff. After, select staff member for student's research Supervisor / Co-Supervisor then that staff member act as a Supervisor / Co-Supervisor. After, he accept topics by student given. Supervisor / Co-Supervisor do chat with the student groups. Supervisor / Co-Supervisor do Evaluate Documents submitted by groups using the provided marking scheme.

Initial Step-By-Step Description

- The staff register to the system.
- The staff can log into the application by entering his credentials.
- He can act as a Supervisor / Co-Supervisor. After, he accept topics.
- He can review the file uploaded by the student and comment.
- He can enter marks on the same file which was uploaded by the student.

2.2.4. Panel Member Use Case

Use case: .Panel Member

Diagram:

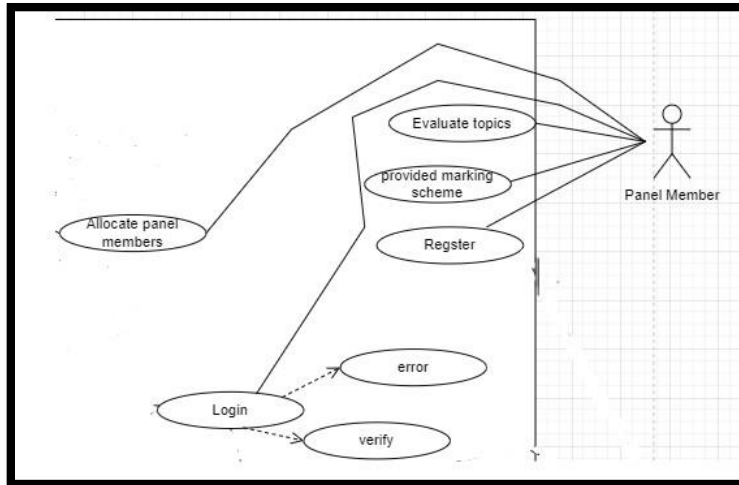


Figure 6 : Panel Member Use Case

Brief Description

First he must register to the system as a staff. After, if admin select staff member for student's research Panel Member then that staff member act as a Panel Member. After, he Evaluate topics by student given. Panel member do Evaluate Documents submitted by groups using the provided marking scheme.

Initial Step-By-Step Description

The staff register to the system.

The staff can log into the application by entering his credentials.

He can act as a Panel Member. After, he Evaluate topics.

He can enter marks on the same file which was uploaded by the student.

The following section describes the Use Cases with Pre and Post Conditions:

Actors	Use case	Pre-condition	Post condition
All	Login	Have an account	Login as admin
Admin	Create submission types		Successfully create submission types
	Delete/update users	Have students, staff, accounts	Successfully delete/update students, staff
	Allocate panel members to student groups	Have registered student groups and panel members	Successfully allocate panel members to student groups
	Create marking schemes		
	Upload document / presentation templates		
	View Role	Have registered admin, students, and staff	
Student	Register	Should not have a student account for relevant student	successfully register a student
	Create student groups	Should have registered students	Successfully create student groups
	Register research top		
	Request supervisor	Should have registered supervisor	
	Request co-supervisor	Should have registered co-supervisor	
	Submit documents		
	Download templates	Should have already uploaded template by admin	Successfully download templates
Staff	Register	Should not have a student account for relevant staff member	successfully register a staff

Supervisor / Co-Supervisor (Staff)	Accept topic	Should have registered topics by student	Accepted/Rejected topic
	Chat with the groups	Should have allocated student groups by admin	
	Evaluate Documents submitted by groups using the provided marking scheme	Should have submitted documents by student group and should have created a marking scheme by admin	
Panel Member (Staff)	Evaluate topics	Should have accepted topic by Supervisor / Co-Supervisor	
	Evaluate students' presentations according to the provided marking scheme		

Table 2 : Use Cases with Pre and Post Conditions:

2.4. User Characteristics

The Student is expected to be Computer literate and be able to use a Computer Application .The staff are expected to be Computer literate and to be able to use Computer Applications .The Admin is expected to be Computer literate and should be able to use button, pull-down menus, and similar tools.

2.5. Non-Functional Requirements

The research project Management System will be a standalone application and requires a computer. The software developed here assumes the use of various tool for connection between the Application and the database. The working of the system will depend on the hardware used rather than characteristics of this system.

2.6. User Documentation

The following documents shall be prepared:

1. Installation Guide
2. Group submission forms
3. Regarding Research document

2.7. Assumptions and Dependencies

The Key Assumptions are:

1. The services is offered for only SLIIT students. So right now whole system is designed based on only one university.
2. There will be one authorized admin for a particular id. So ID will be unique.
3. There will be one authorized student for a particular id. So ID will be unique.
4. There will be one authorized staff for a particular id. So all ids will be unique.
5. The services can be qualified in terms of volumes of data, trends, frequency of updating in order to give an introduction to the technical system.

3.0. Requirements Specification

3.1. External Interface Requirements

3.1.1 User Interfaces

The user interface section defines the way various stakeholders interact with the system. All the screens will be developed to work on web site. Error messages will appear as a popup on the screen. Buttons will there to make the navigation simpler. If the user has not registered to the, then he/she should be able to redirect to the sign up page from login screen. Every user should have the profile where he/she can do their own task. After the creation of account the user can login to the application and will be able to do their wish work. Similarly, here will be the same option for the login of the staff where the staff can sign up and login. An Admin should also be log in to the web portal where he/she can administer the system by managing the student and staff using the application.

3.1.2 Hardware Interfaces

This system will design as a website, so it must have a computer and access to the Internet. The hardware connection between the database server and application is managed by the underlying operating system on the computer.

3.1.3 Software Interfaces

The system is self-contained and no data is supposed to share with the third party. The communication of the application between the databases consist of both reading and modifying the data, while the communication between the database and the application consists of only reading operation.

3.1.4 Communications Interfaces

The communication between the different parts of the system is important since they depends on each other. However, in what way the communication is achieved is not important for the system and is therefore handled by the underlying operating system for the application.

3.2 Functional Requirements

3.2.1. Login:

Use Case Name	Login
Trigger	All Actors assesses the Research Project Management Tool
Precondition	The Application is already installed in the system and the Actor is added in the database by the Admin.
Basic Path	The Actors open the system and enter their credentials. If the Admin has added the actor as a user he will be able to access the system otherwise an error will be shown.
Post condition	The Actor is logged into the system
Exception Paths	The Actor may leave the login page anytime.

Table 3: Login

3.2.2. Admin: Create submission types

Use Case Name	Create submission types
Trigger	Admin assesses the Research Project Management Tool
Precondition	Login to the system
Basic Path	The admin open the system and enter their credentials. Then admin can Create the submission types for students.
Post condition	Successfully create submission types

Table 4: Create submission types

3.2.3. Admin: Delete/update users

Use Case Name	Delete/update users
Trigger	Admin assesses the Research Project Management Tool
Precondition	Have students, staff, accounts
Basic Path	The admin open the system and entire their credentials. Then admin can Delete and update the user information.
Post condition	Successfully delete/update students, staff

Table 5: Delete/update users

3.2.4. Admin: Allocate panel members to student groups

Use Case Name	Allocate panel members to student groups
Trigger	Admin assesses the Research Project Management Tool
Precondition	Have registered student groups and panel members
Basic Path	The admin open the system and entire their credentials. Then admin Allocate panel members to student groups
Post condition	Successfully allocate panel members to student groups

Table 6: Allocate panel members to student groups

3.2.5. Student: Register

Use Case Name	Register
Trigger	Student assesses the Research Project Management Tool
Precondition	Should not have a student account for relevant student
Basic Path	The student open the system and entire their credentials. If the Admin has added the student as a user he will be able to access the system otherwise an error will be shown.
Post condition	Successfully register a student.

Table 7 : Register

3.2.6. Student: Create student groups

Use Case Name	Create student groups
Trigger	Student assesses the Research Project Management Tool
Precondition	Should have registered students
Basic Path	The student open the system and entire their credentials. Then student can create the student groups.
Post condition	Successfully create student groups

Table 8 : Create student groups

3.2.7. Student: Download templates

Use Case Name	Download templates
Trigger	Student assesses the Research Project Management Tool
Precondition	Should have already uploaded template by admin
Basic Path	The student open the system and entire their credentials. Then student can download templates
Post condition	Should have already uploaded template by admin

Table 9: Download templates

3.2.8. Staff: Register

Use Case Name	Register
Trigger	Staff assesses the Research Project Management Tool
Precondition	Should not have a student account for relevant student
Basic Path	The staff open the system and entire their credentials. If the Admin has added the staff as a user he will be able to access the system otherwise an error will be shown.
Post condition	Successfully register a student.

Table 10: Register

3.2.9. Supervisor / Co-Supervisor (Staff): Accept topic

Use Case Name	Accept topic
Trigger	Staff assesses the Research Project Management Tool
Precondition	Should have registered topics by student
Basic Path	The staff open the system and entire their credentials. Then Supervisor / Co-Supervisor (Staff) accept the topics given by students
Post condition	Accepted/Rejected topic

Table 11 : Accept topic

3.2.10. Supervisor / Co-Supervisor (Staff): Chat with the groups

Use Case Name	Chat with the groups
Trigger	Staff assesses the Research Project Management Tool
Precondition	Should have allocated student groups by admin
Basic Path	The staff open the system and entire their credentials. Then Supervisor / Co-Supervisor (Staff) chat with the groups
Post condition	

Table 12 : Chat with the groups

3.2.11. Supervisor / Co-Supervisor (Staff): Evaluate Documents submitted

Use Case Name	Evaluate Documents submitted
Trigger	Staff assesses the Research Project Management Tool
Precondition	Should have submitted documents by student group and should have created a marking scheme by admin
Basic Path	The staff open the system and entire their credentials. Then Supervisor / Co-Supervisor (Staff) evaluate documents submitted by groups using the provided marking scheme
Post condition	

Table 13 : Evaluate Documents submitted by Supervisor

3.2.12. Panel Member (Staff): Evaluate topics

Use Case Name	Evaluate topics
Trigger	Staff assesses the Research Project Management Tool
Precondition	Should have accepted topic by Supervisor / Co-Supervisor
Basic Path	The staff open the system and entire their credentials. Then Panel Member (Staff) evaluate topics
Post condition	

Table 14 : Evaluate topics

3.2.13. Panel Member (Staff): Evaluate Documents submitted

Use Case Name	Evaluate Documents submitted
Trigger	Staff assesses the Research Project Management Tool
Precondition	Should have submitted documents by student group and should have created a marking scheme by admin
Basic Path	The staff open the system and enter their credentials. Then Panel Member (Staff) evaluate documents submitted by groups using the provided marking scheme
Post condition	

Table 15 : Evaluate Documents submitted by panel member

3.3. Performance Requirements

1. The completely separate business logic at admin side from the student interface ensures good performance.
2. The system exhibits high performance because it is well optimized. The business logic is clearly separate from the UI.
3. System should be able to scale too many users concurrently.
4. System is available 24 by 7.

3.4. Safety Requirements

1. Errors will be minimized and an appropriate error message that guides the user from an error will be provided.
2. Validation of users input is highly essential.
3. The time taken to recover from the error is less than 10 second.

3.5. Security Requirements

1. The system is provided a high level of security and integrity of the data held by the system.
2. Only authorized personnel such as admin can gain access to the private data and only the user with valid username and password is allowed to view its user page.

3.6. Software Quality Attributes

1. The key software quality attributes are Availability, Reliability and usability.
2. As the system is expected to be 24/7 working. High availability is important.
3. A simple but quality user interface is developed to make it easy to understand and required less training.
4. The error message displayed is more descriptive and can be easily understood.

3.7. Business Rules

1. System shall be available only for the particular college.
2. All the users shall access the system using a login/user-id and password. The login-id/password will be managed in a secured manner.
3. Each student can have only one account.