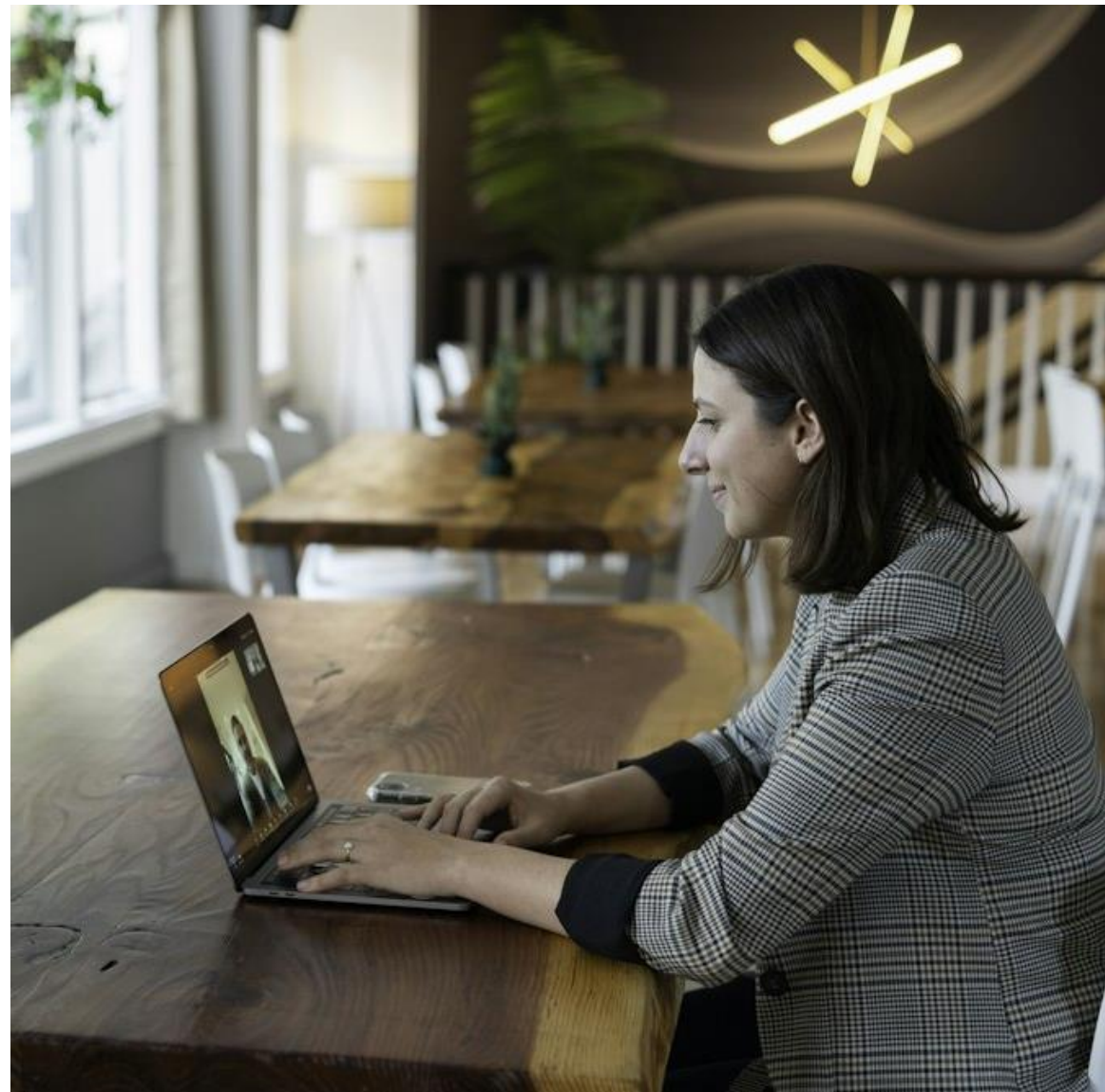




# KnowledgeConnect

Next-Gen Virtual Study Groups Platform

R24-077



# Meet Our Team



**Ms. Anjalie Gamage**

*Supervisor*



**Mr. Nelum Chathuranga**

*Co - Supervisor*



**Divyanjana W.A.K**

IT21079740



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# INTRODUCTION

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- Self-study is crucial for personal and academic growth
- However, studying alone can be **boring** and **isolating** for many students.
- It **Decreases motivation** and engagement with their studies.

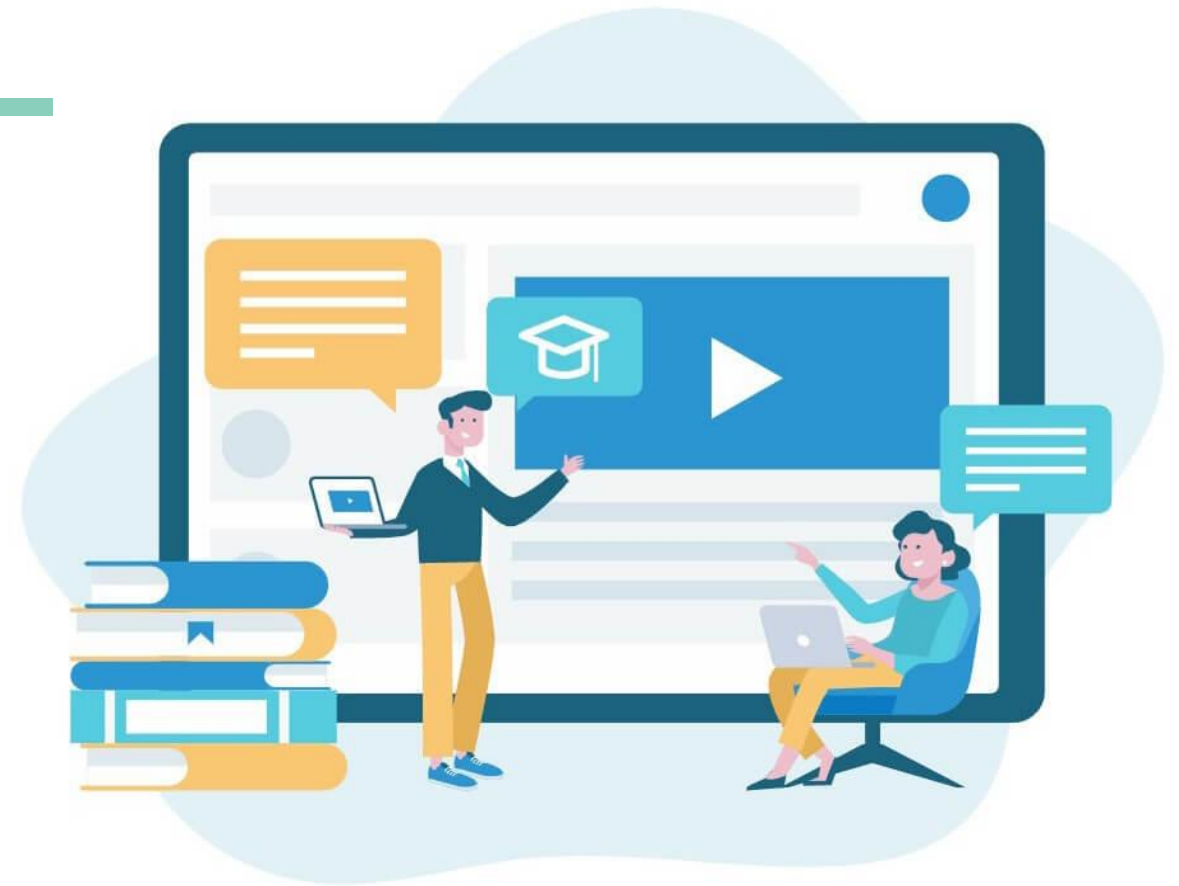
Some studies suggest that collaborative learning environments can enhance student's engagement, motivation, and academic performance.



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This study propose a **system** that provide facilities for students to join a **virtual educational environment** based on their study styles .

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# Research Question

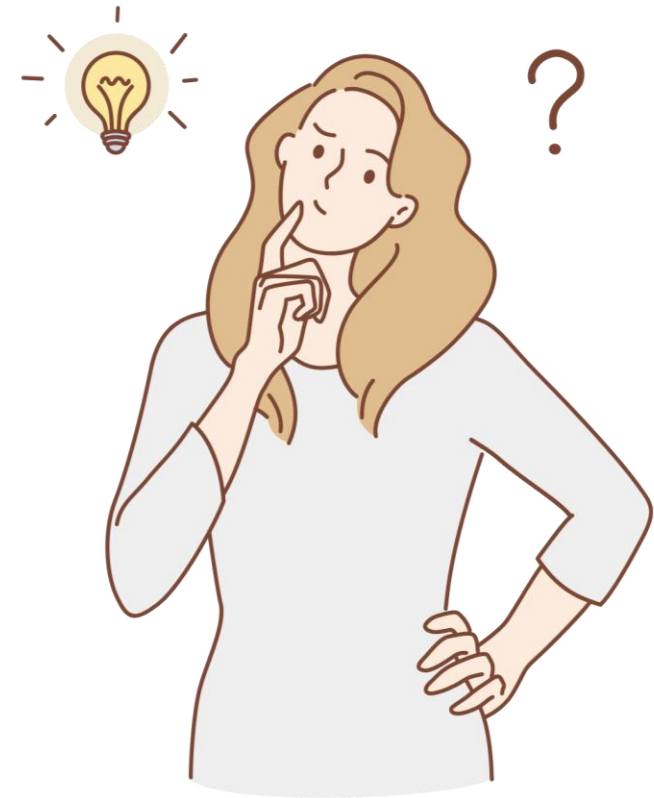
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How does a virtual study platform impact student collaboration and engagement compared to traditional methods?

Does grouping students on their learning style is effective?

Can students collaboratively work within the workspace at the same time?

What difficulties do users encounter when using virtual study platforms, and how can these be resolved to enhance the overall user experience?



# Objectives

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## Development of the "KnowledgeConnect - Virtual Study Group Platform" application

01

Development of Virtual Study Group platform

02

Development of Collaborative Workspace

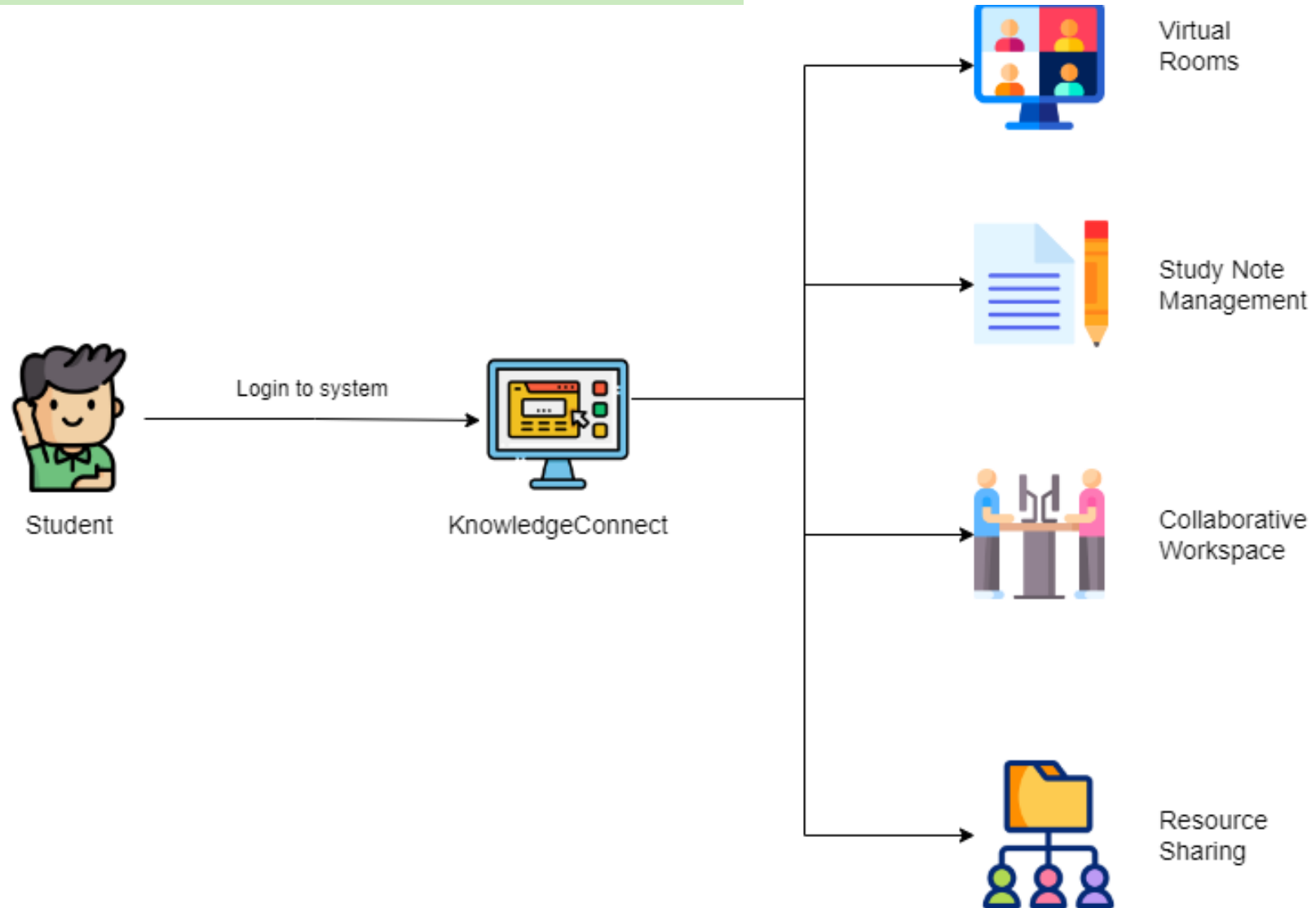
03

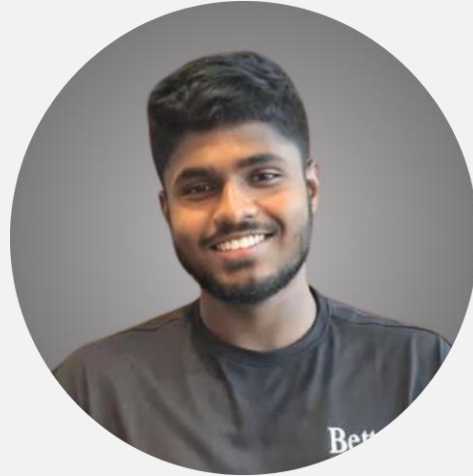
Development of Study Notes and management system

04

Development of Resource Sharing platform

# Overall System Diagram





**IT21079740**  
**Divyanjana W.A.K**

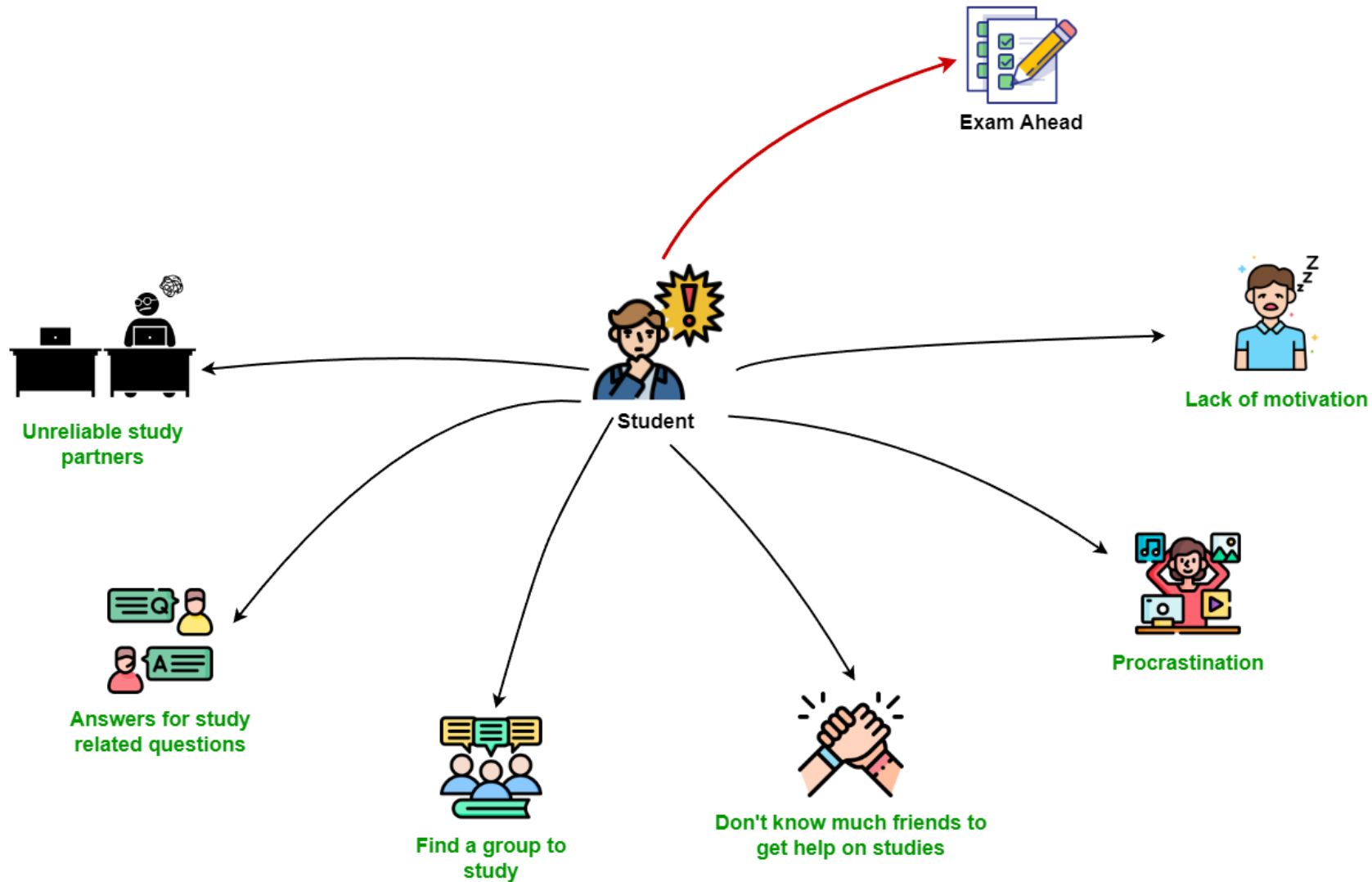
Specialization : Information Technology



Component : **Virtual Study Group**



# Background: Virtual Study Group



# Research Problem

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What is the effectiveness of grouping by study styles?

What is the long-term impact on Academic Success?

What is the impact of peer learning?

What motivates students to actively engage in collaborative learning activities?



# Specific and Sub Objectives

## Main Objectives

- Enhance 1st year computing students' academic success by grouping them based on their study styles, facilitating effective group study, and fostering peer support.



## Sub Objectives

1. Developing a questionnaire to identify students' study styles.
2. Creating a system to group students based on their study styles.
3. Implementing a virtual room function for students to start group meetings.
4. Establishing a forum where students can ask and answer questions.
5. Designing a rating system to evaluate students' participation and contributions.

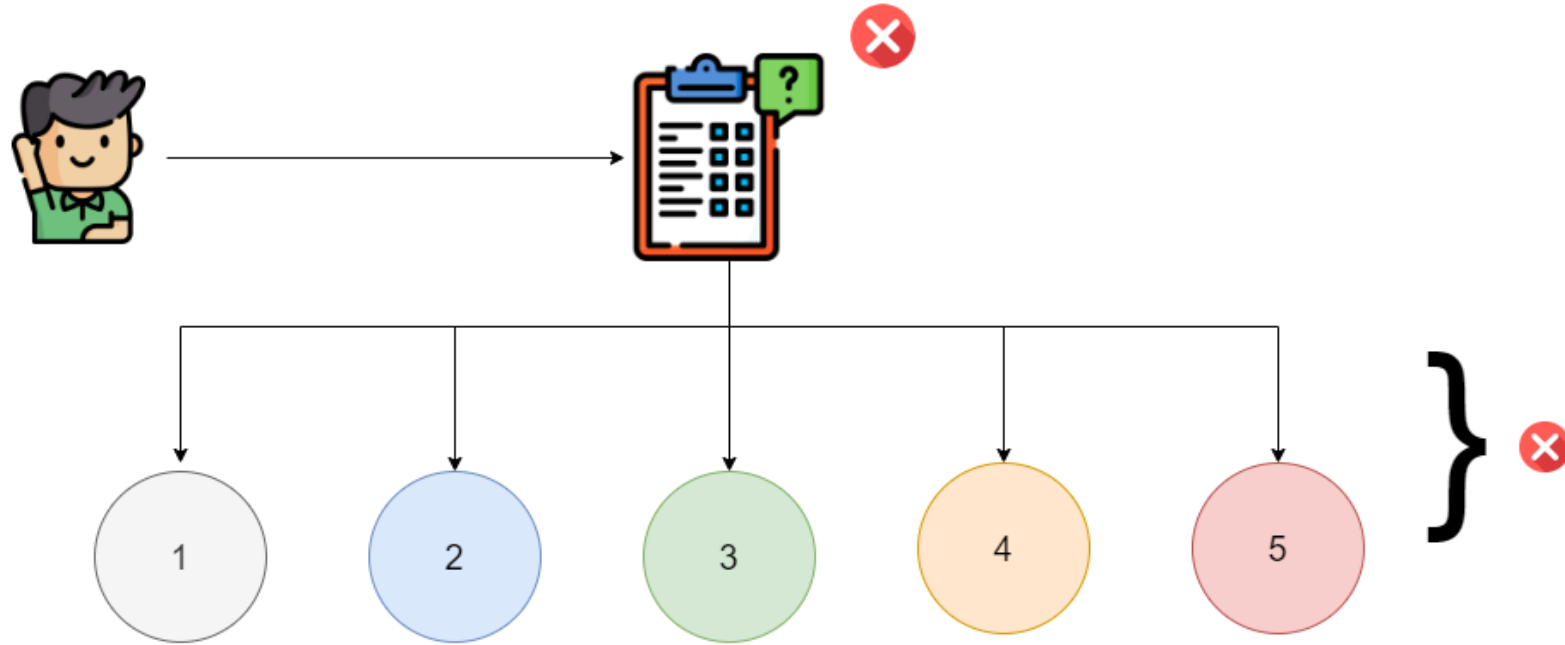
# Research Gap

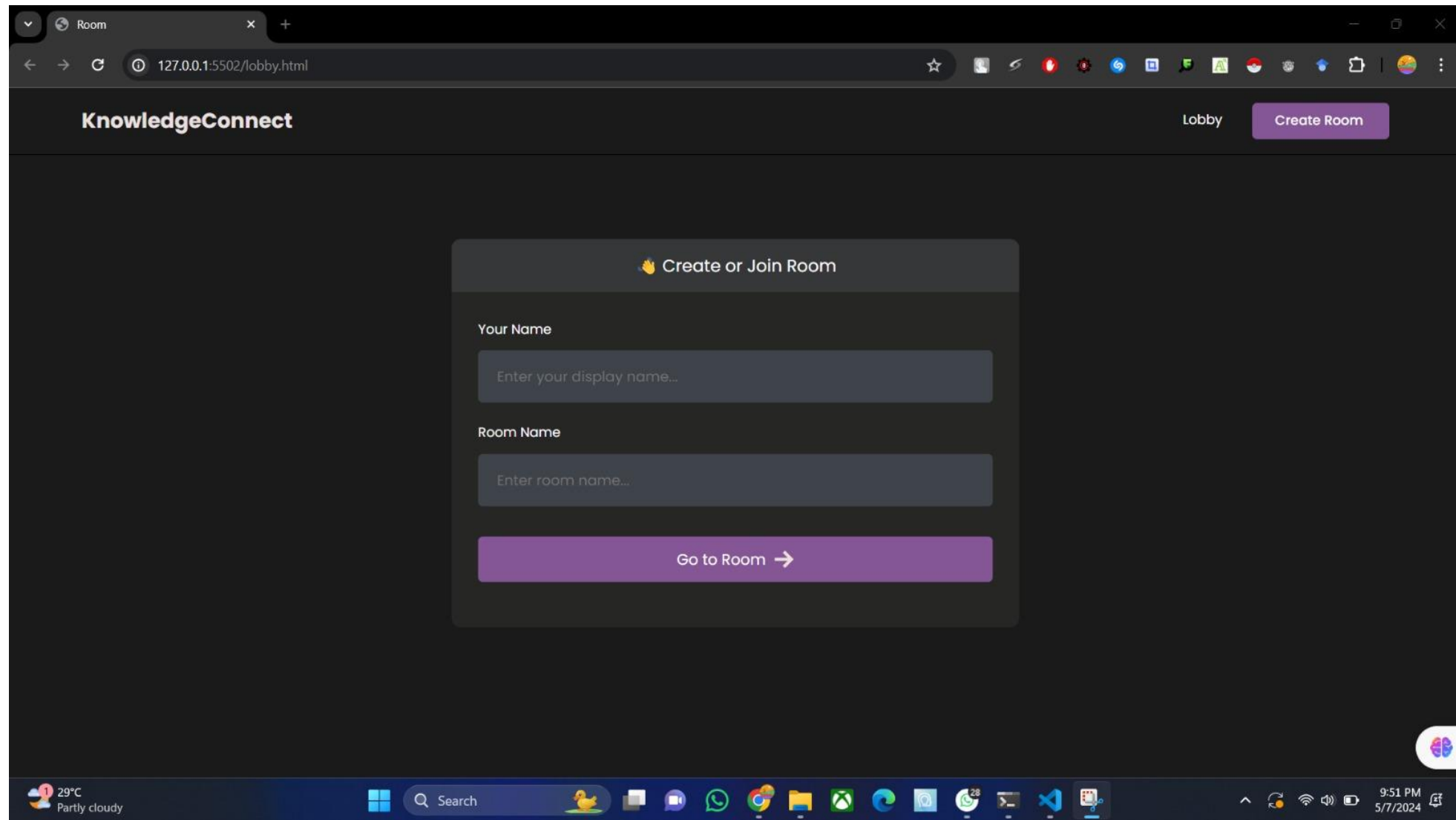
Compared to other research papers in this area, our component covers:

- Utilizing a questionnaire to identify study styles.
- Grouping students on their study styles.
- Incorporating a forum for student questions and answers.
- Introducing a rating system for student participation.



# Progress





Create Private Virtual Rooms

**KnowledgeConnect** Create Room

**Participants** 3

- Pumpkin
- Bread 150g
- Kavindu Divyanjana

```

1  <!DOCTYPE html>
2  <html>
3  <head>
4    <meta charset="utf-8">
5    <meta http-equiv="X-UA-Compatible" content="IE=edge">
6    <title>Room</title>
7    <meta name="viewport" content="width=device-width, initial-scale=1">
8    <link rel="stylesheet" type="text/css" media="screen" href="styles/main.css">
9
10   <link rel="stylesheet" type="text/css" media="screen" href="styles/room.css">
11 </head>
12 <body>
13
14   <div id="nav">
15     <div class="nav_list">
16       <button id="members_button">
17         <svg width="24" height="24" xmlns="http://www.w3.org/2000/svg" fill-rule="evenodd" clip-rule="evenodd">path d="M24 18v1h-1h24z" />
18       </button>
19       <a href="lobby.html">
20         <div id="logo">
21           
22           <span>KnowledgeConnect</span>
23         </div>
24       </a>
25     </div>
26
27     <div id="nav_links">
28       <button id="chat_button"><svg width="24" height="24" xmlns="http://www.w3.org/2000/svg" fill-rule="evenodd" fill="redede0" clip-rule="evenodd">path d="M24 18v1h-1h24z" />
29       <a class="nav_link" href="/">
30         <div id="lobby">
31           <svg xmlns="http://www.w3.org/2000/svg" width="24" height="24" fill="redede0" viewBox="0 0 24 24">path d="M0 7.001v5.001h2.001" />
32         </div>
33       <a class="nav_link" id="create_room_btn" href="lobby.html">
34         <div id="create_room">
35           <svg xmlns="http://www.w3.org/2000/svg" width="24" height="24" fill="redede0" viewBox="0 0 24 24">path d="M0 7.001v5.001h2.001" />
36         </div>
37     </div>

```

Welcome to the Room Pumpkin! 🍂

**Knowledge Connect Bot**

Welcome to the Room Bread 150g! 🍞

**Knowledge Connect Bot**

Welcome to the Room Kavindu Divyanjana! 🍂

**Knowledge Connect Bot**

Welcome to the Room David! 🍂

**Knowledge Connect Bot**

Kavindu Divyanjana has left the room.

**Knowledge Connect Bot**

David has left the room.

**Knowledge Connect Bot**

Welcome to the Room Kavindu Divyanjana! 🍂

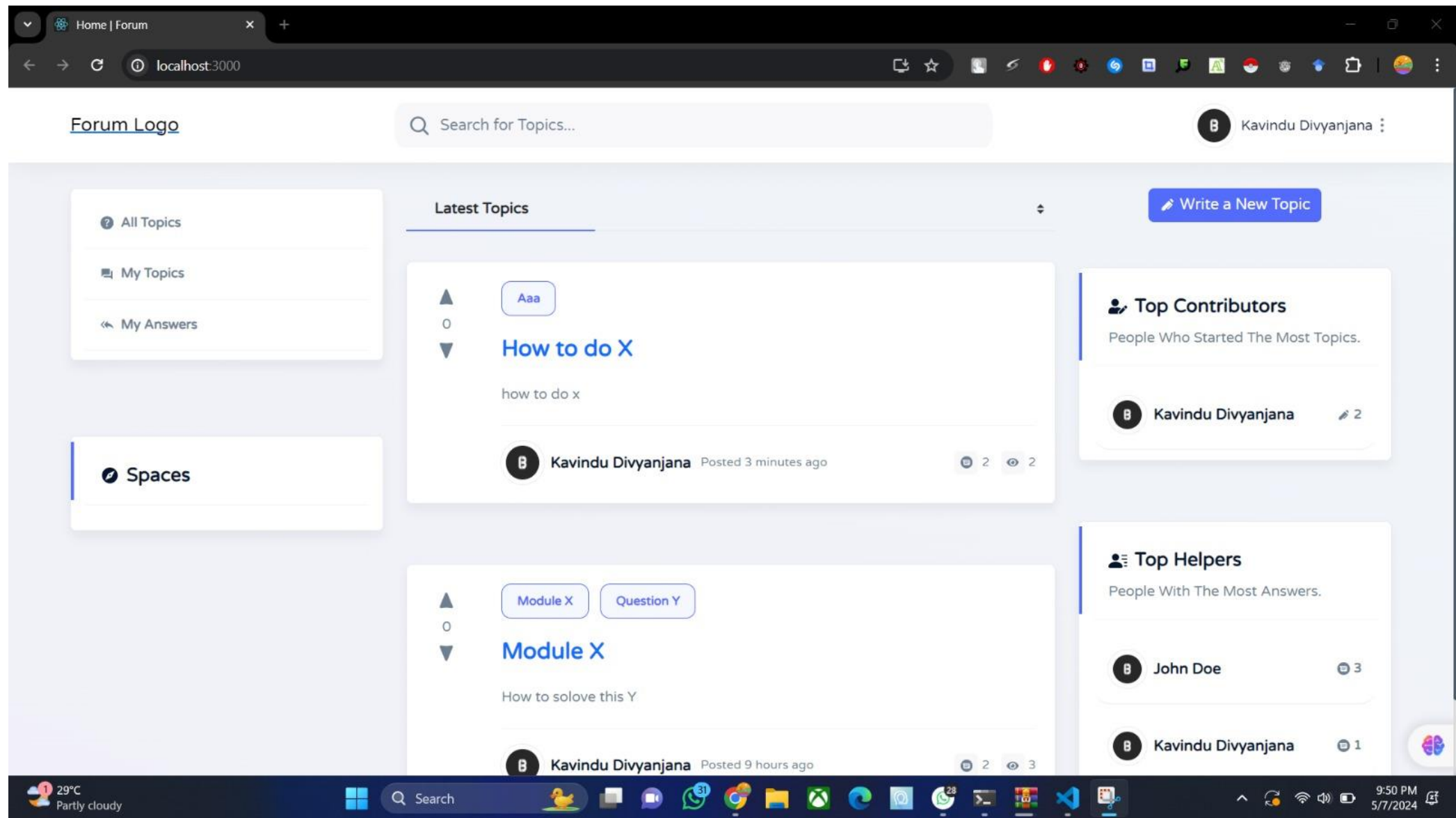
Send a message...

29°C Partly cloudy

Search

9:55 PM 5/7/2024

## Virtual study rooms



Discussion forum with Ranking





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**Galhenage K.H.P**

Specialization : Information Technology

Component : **Study notes management system**

# Introduction: Study notes and management System



- This involves building a simple academic note management system that users can easily access and use. Notes can be categorized by adding tags and notes will be synced across all devices and note history will manage to reverse changes to notes.
- Also, users will be able to get the support of AI to gain insight on their study notes, like further study areas, missing points and how the notes can be improved.
- Include a function that keeps track of and shows note revision histories, assisting students in tracking modifications and making necessary revisions.
- Note history can be attained through a version control system that allows to see previous versions of notes.

# Research Gap

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Compared to other research papers in this area this approach covers,

- Generative AI to enhance study notes by making suggestions and finding out what are the missing points.
- A version control system to see previous versions of the saved notes.



# Research Problem

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figuring out the most effective and dependable synchronization strategy to minimize latency and possible conflicts and guarantee smooth note updates across all devices

How to optimize the Generative AI model to make suggestions on the notes?

How to optimize the Generative AI model to make suggestions on the notes?



# Specific and Sub Objectives

## Main Objectives

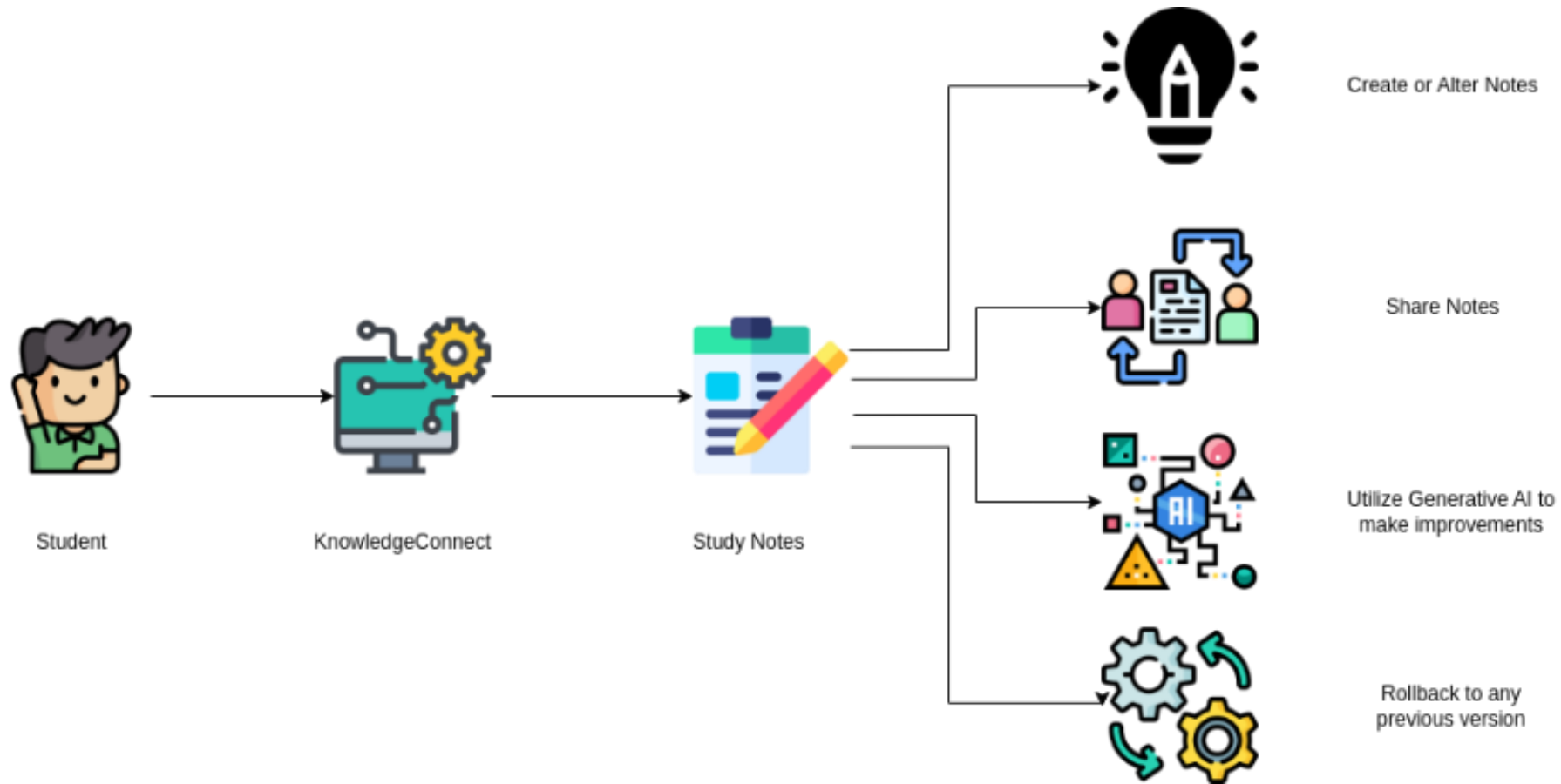
To develop a simplified study notes management system that enables users to easily access, categorize, synchronize, and manage their study notes across multiple devices.



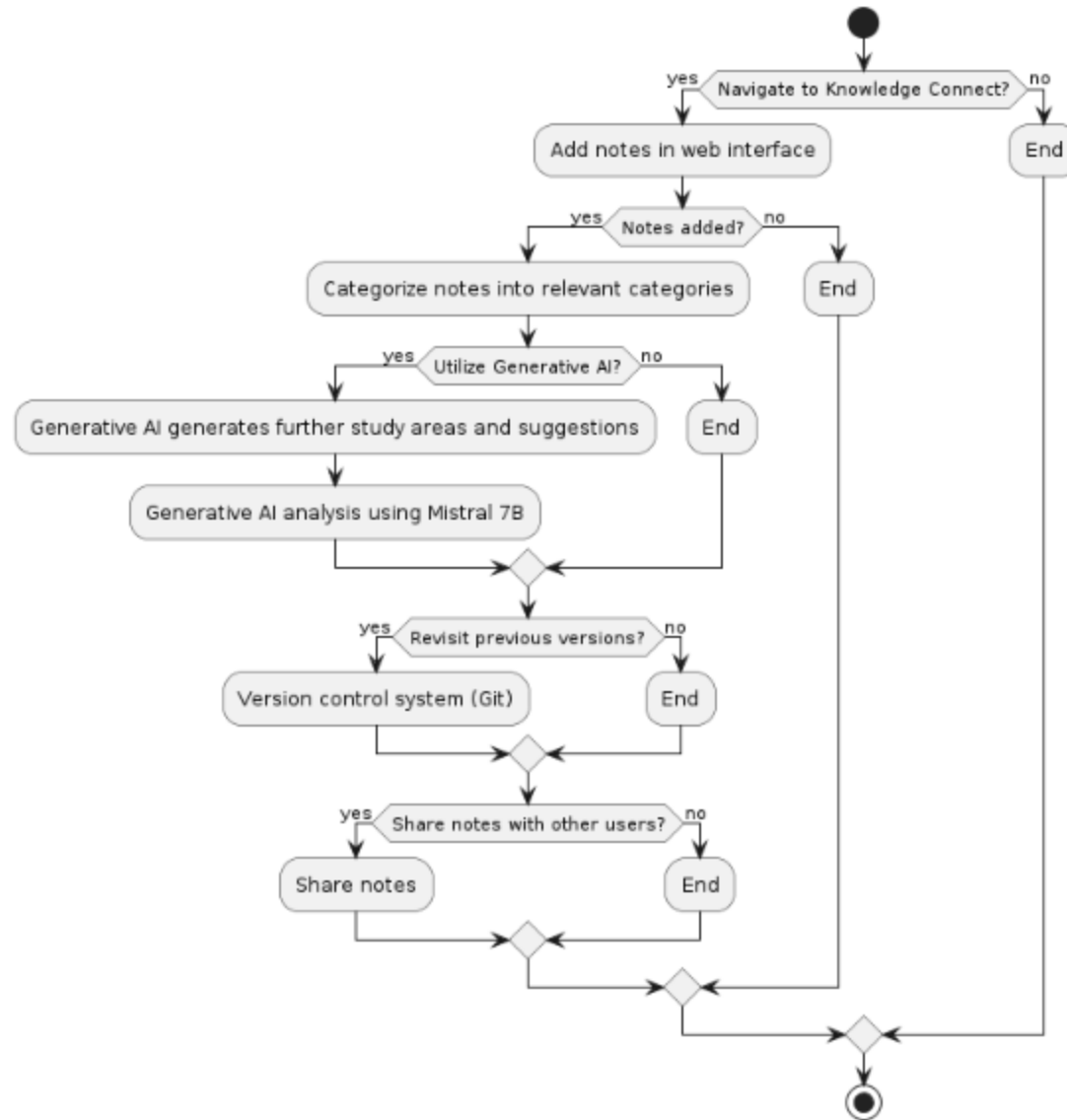
## Sub Objectives

1. Provide a simple, intuitive design that makes it quick and unnecessary for users to write, organize, and access their study notes.
2. Put in place a strong system for labeling notes that helps users organize them effectively and facilitates searching and retrieving particular themes or subjects.
3. Create a smooth synchronization system to guarantee that notes are automatically updated and available on PCs, tablets, and cellphones.
4. Include a feature that lets users keep track of the changes they've made to their notes over time and, in case they need to, roll back to earlier versions.
5. Integrate a Generative AI model to make suggestions on how to improve, what are the missing points, and further study areas of the notes individually.

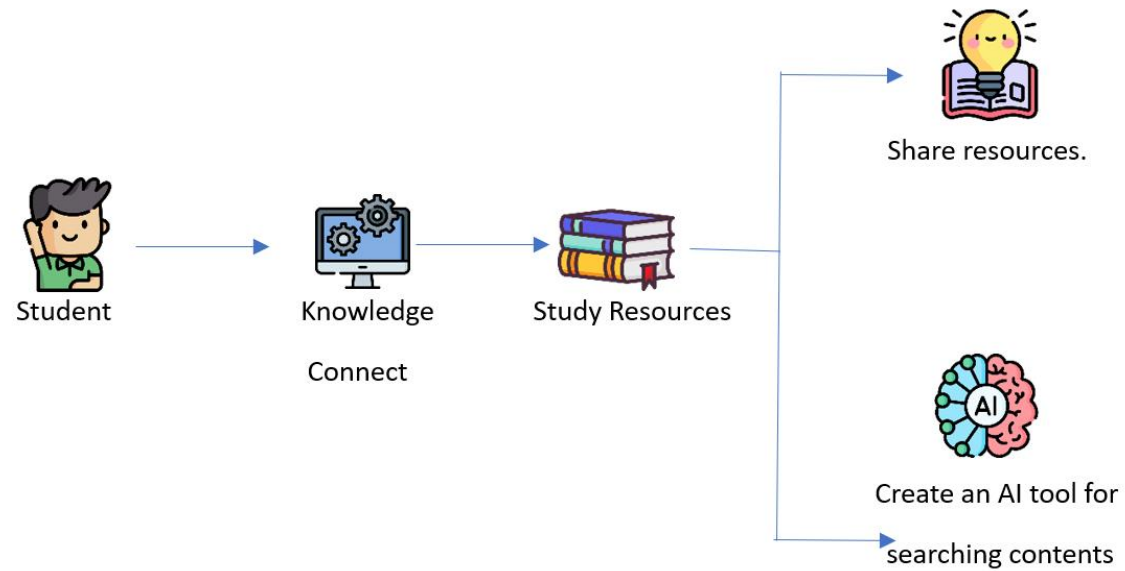
# System Diagram



# Methodology in detail using the flowchart



# System Diagram





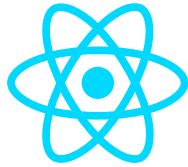
# Technologies

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Figma



React



Node Js



python



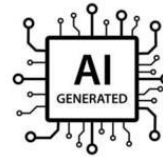
Mongo DB



HTTPS



generative AI



Git



**THANK YOU**