UNITED INTERNATIONAL **UNIVERSITY**

MSCSE Program

(Project Proposal)

Date: 25/02/2023

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6. Name of the Program : **Master of Science in Computer Science and Engineering (MSCSE)**

7. Supervisor's Name & Designation : **Supervisor: A. S. M. Fazle Rabbi**
Adjunct Faculty, Asst. Professor, CSE, UIU
Tech Lead- AGM, Software Dept, Orange IT Ltd, United Group
Co-Supervisor: Dr. Suman Ahmmed
Assistant Professor, Dept. of CSE & Director- CDIP

8. Tentative Title : **EduBridgebd**

9. Trimester Enrollment for Project : **Spring 2023**

10. Trimester of Proposal Submission: **Summer 2023**

11. Background, Present State of the Problem and Objectives: Bangladesh, like many other countries, faces a challenge in providing quality education to its young population due to a lack of sufficient accommodation facilities for in-person teaching. In this context, e-learning platforms have emerged as a viable solution to provide education to students remotely. However, while there are many e-learning platforms available, there is a need for a customizable solution that can cater to the specific needs of individual teachers and students.

In the post-COVID-19 era, eLMS has gained tremendous popularity among students. There is an ongoing debate about the pros and cons of online learning compared to traditional classroom education. One major advantage of online education is the abundance of data that can be analyzed to evaluate student performance and provide personalized feedback. Our eLMS platform includes various modules, but the student evaluation module is the most crucial. It comprises a health check segment with five categories: attendance, class progress, quiz marks, video duration, and assignment marks. Each category contributes to the total mark, with assignment average mark percentage contributing 40%, quiz average mark percentage contributing 20%, attendance contributing 10%, class progress contributing 15%, and video duration contributing 15%. If each category has three attributes (good, average, and below average), there are a total of 243 possible combinations for generating personalized feedback. However, our platform provides ten suggestion slabs for the overall mark. The assignment analytics segment shows individual student progress against the top performers in a high chart. Additionally, there is a bar chart showing questions that students struggle with to help identify their weaknesses. Besides the proposed e-learning platform aims to provide a customizable solution that allows anyone from anywhere to create their own teaching template in a more flexible format. This platform will enable students to access a wide range of syllabus, from school to university and professional exams, from the comfort of their own homes. The platform will provide a range of tools to support the teaching process, including a teacher module for educators to create their own lessons and assessments, a question bank for students to access and practice, and in future, an AI system to provide suggestions to teachers on how to improve their teaching.

By providing a customizable and flexible e-learning platform, the aim is to improve access to quality education for students in Bangladesh and beyond. This platform will enable educators to share their knowledge with a wider audience, while also enabling students to learn at their own pace and on their own schedule. Ultimately, this platform will contribute to the overall development of the education sector in Bangladesh, and help to build a more educated and skilled workforce for the future.

12. Proposed System Diagram

12.1 Data Flow Diagram (DFD)

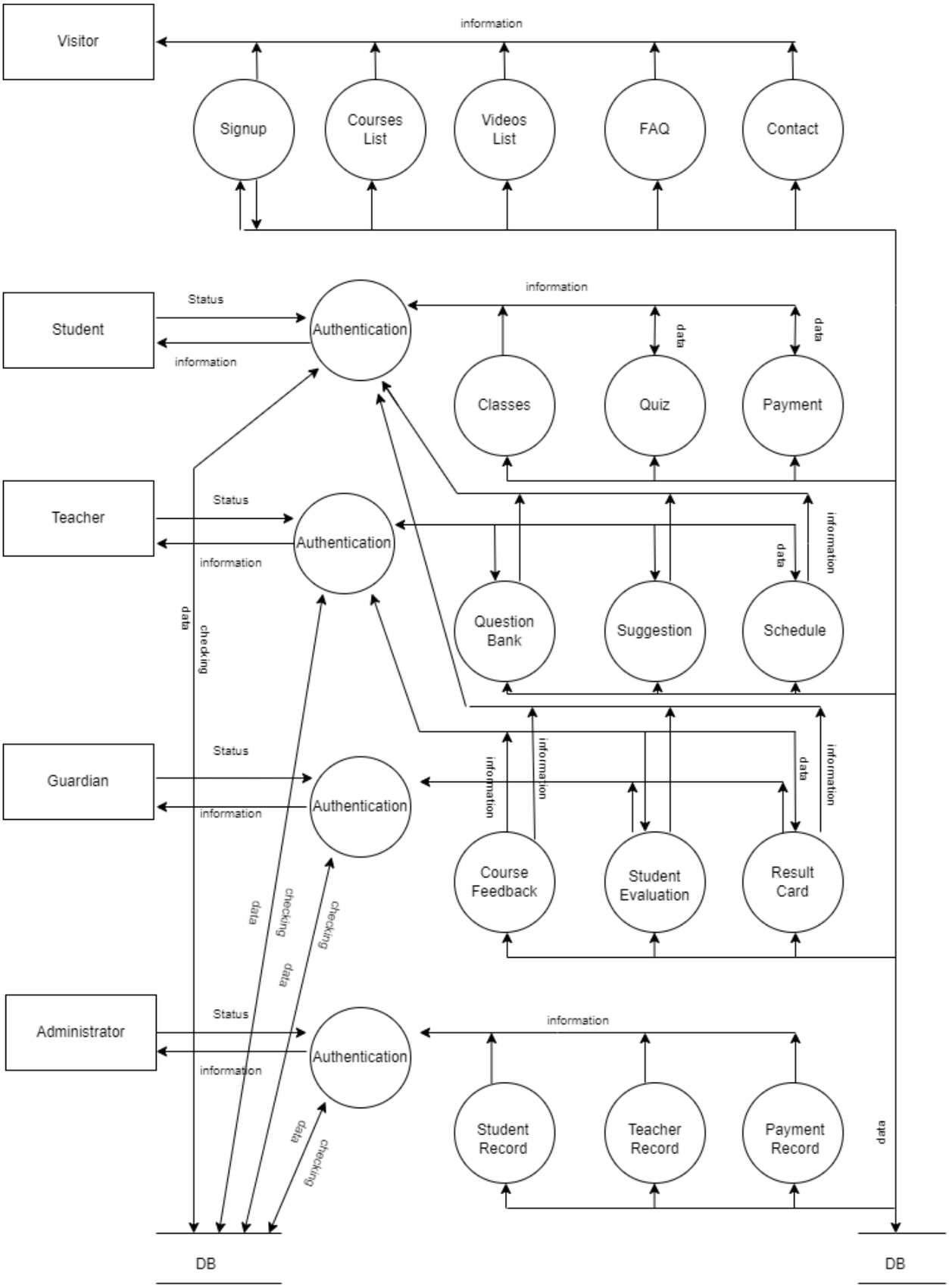


Figure: DFD Level-1 Diagram for eLMS

12.2 Unified Modeling Language (UML) Diagram

12.2.1 Use-case Diagram

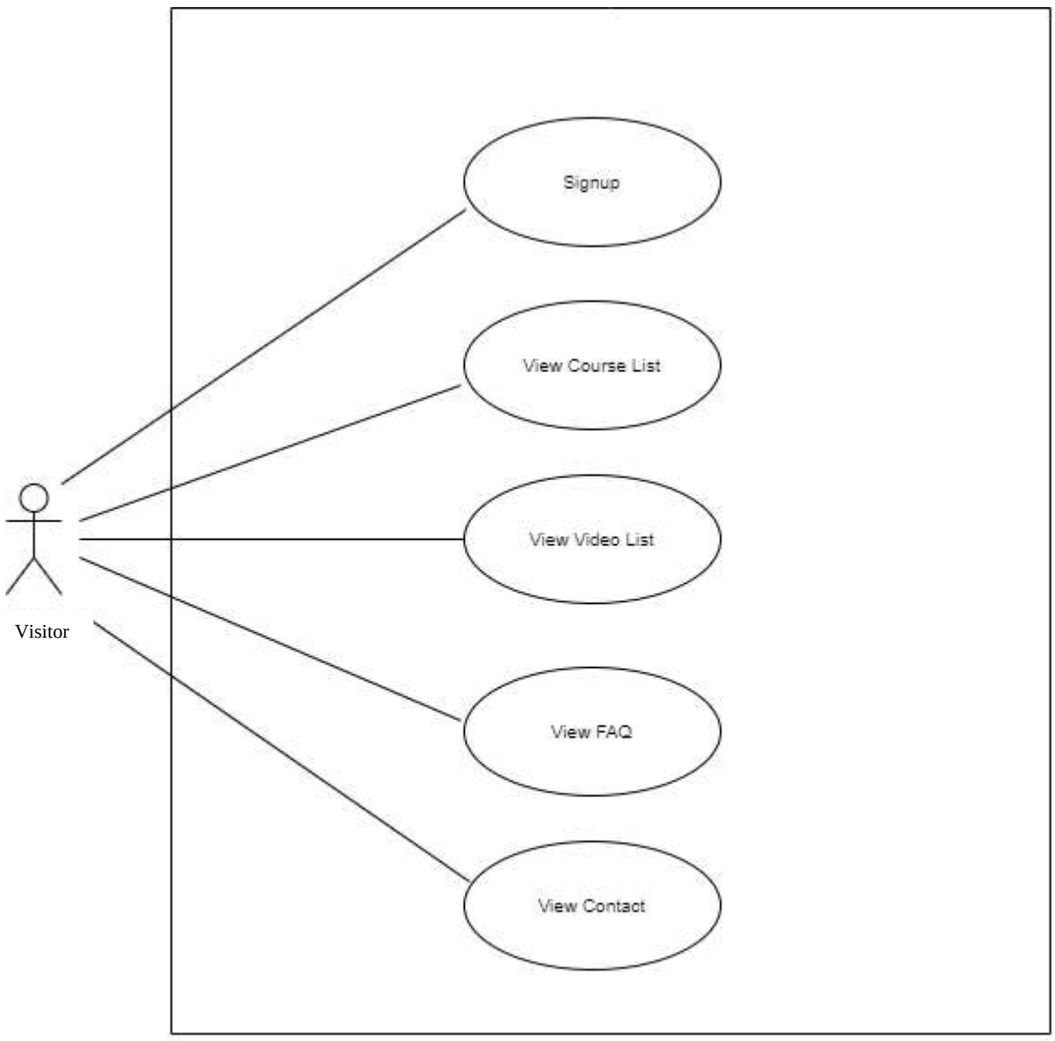


Figure: Use Case Diagram for Visitor

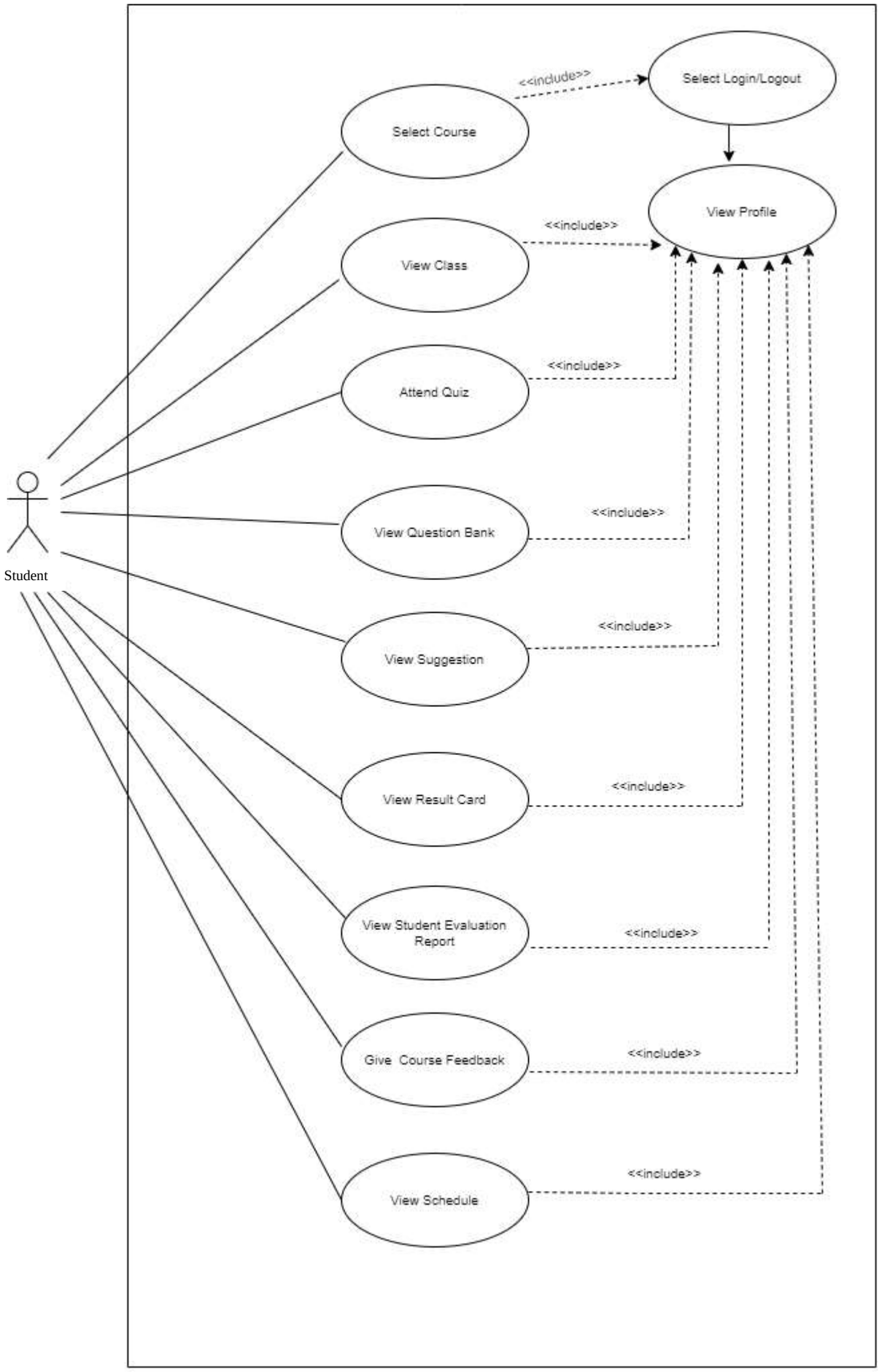


Figure: Use Case Diagram for Student

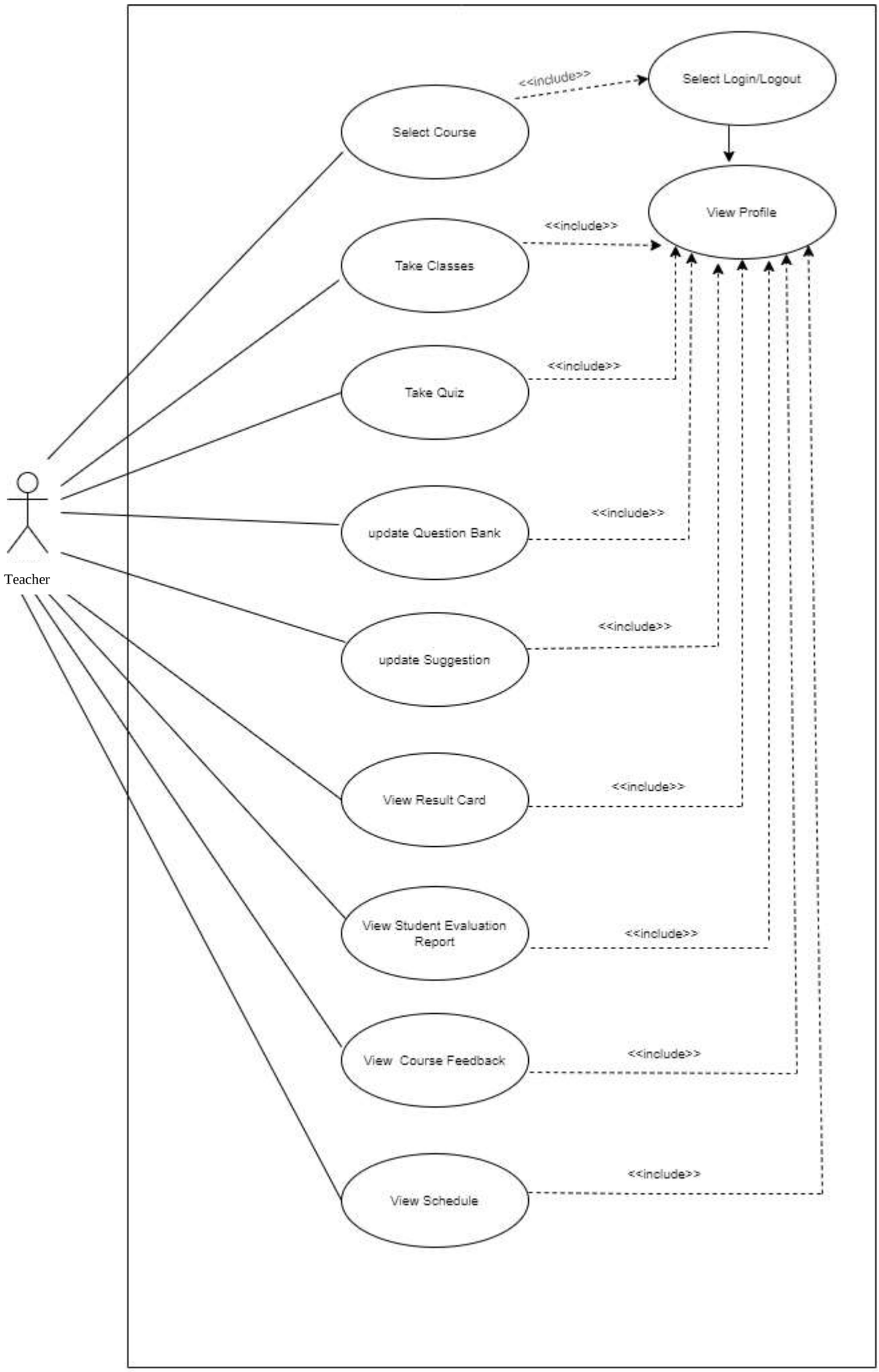


Figure: Use Case Diagram for Student

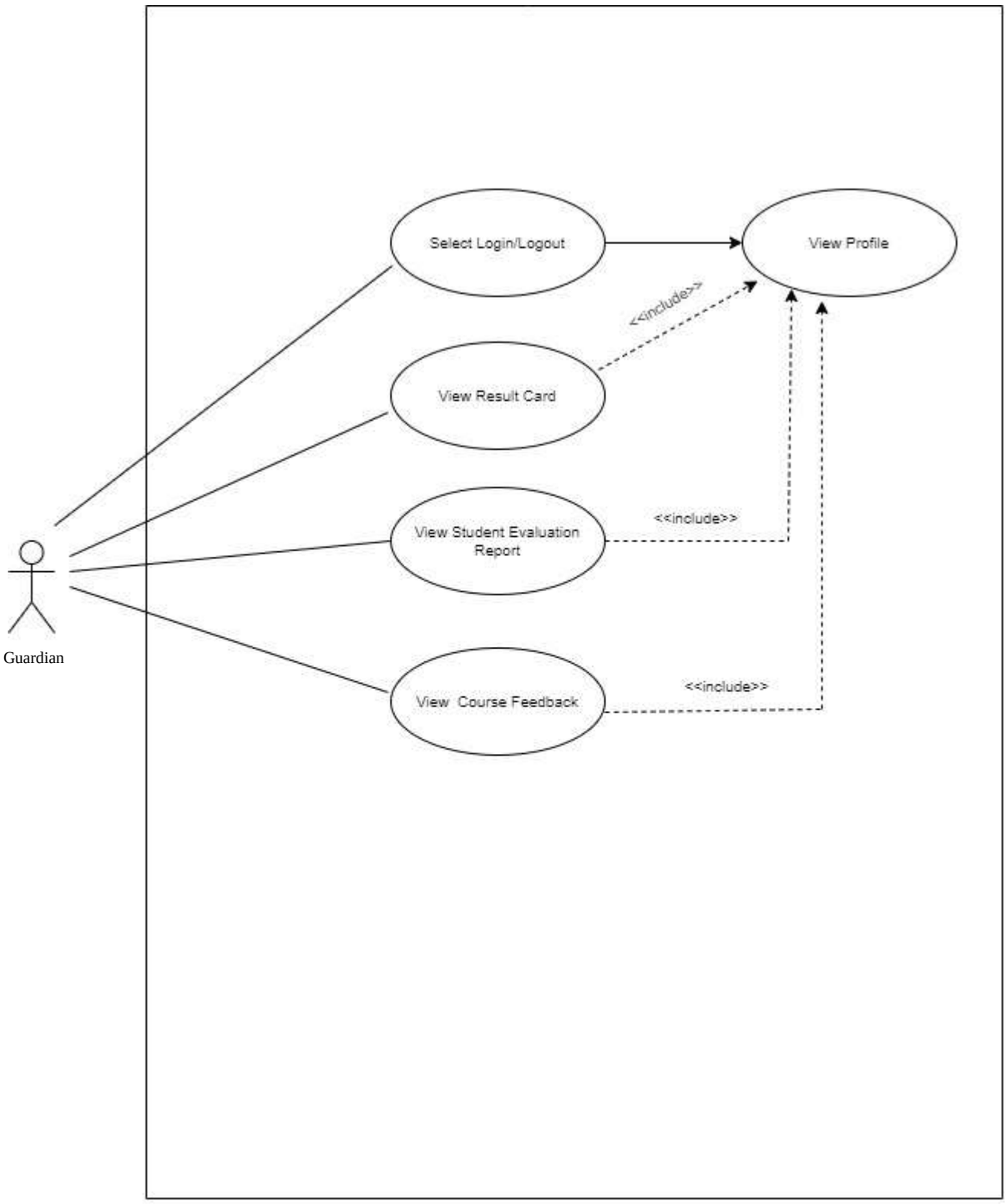


Figure: Use Case Diagram for Guardian

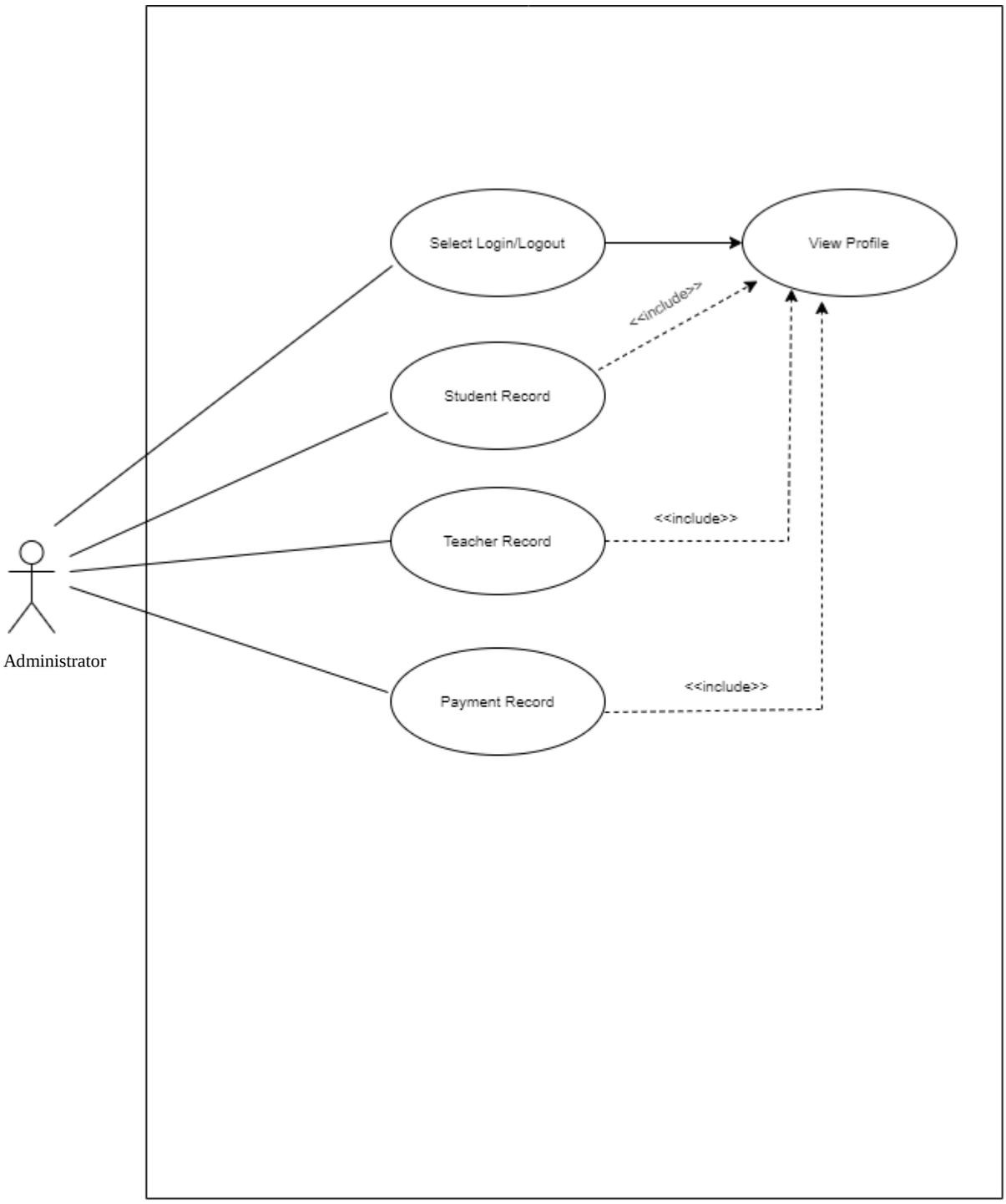
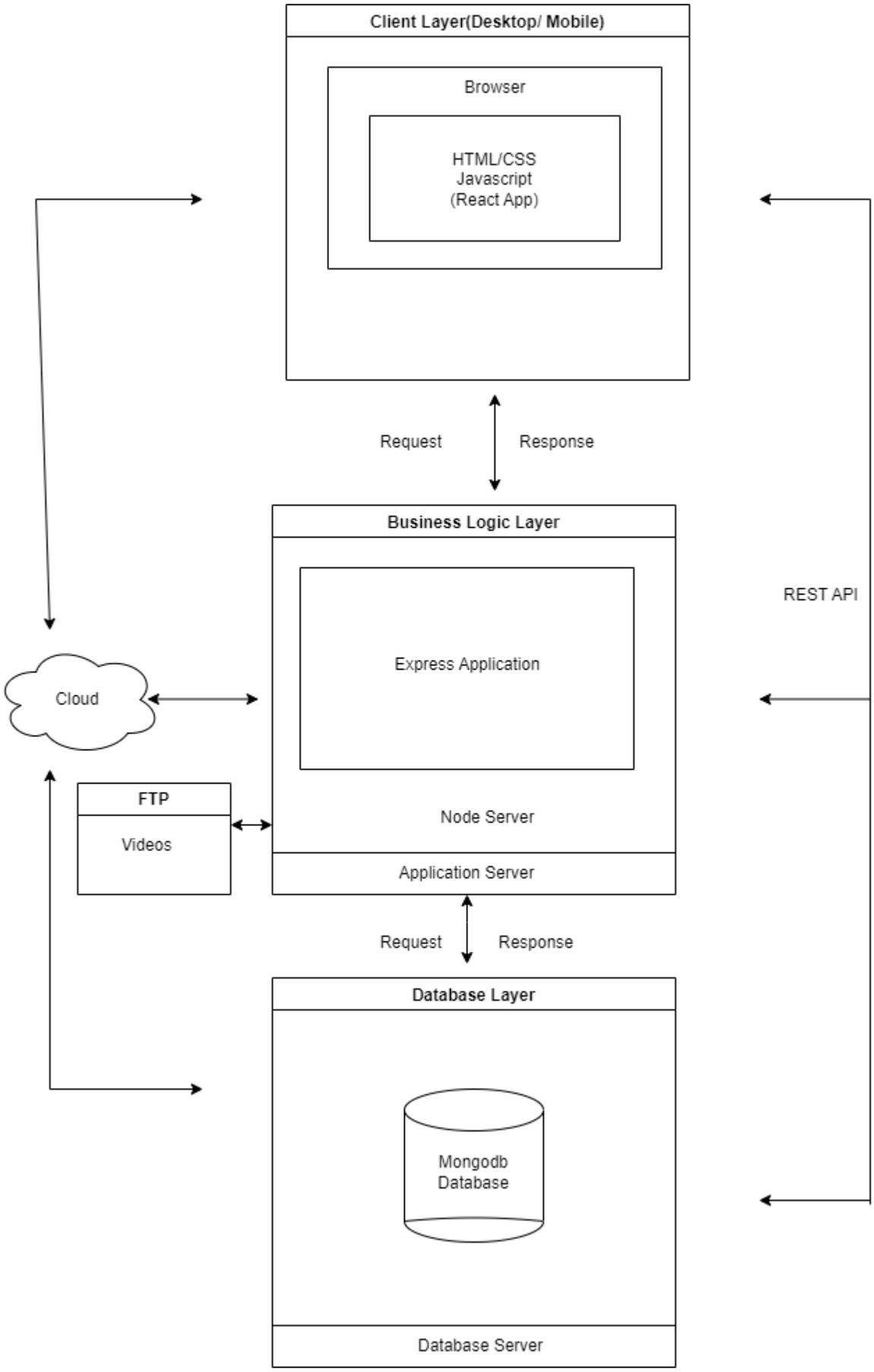


Figure: Use Case Diagram for Administrator

12.3 Software Architecture

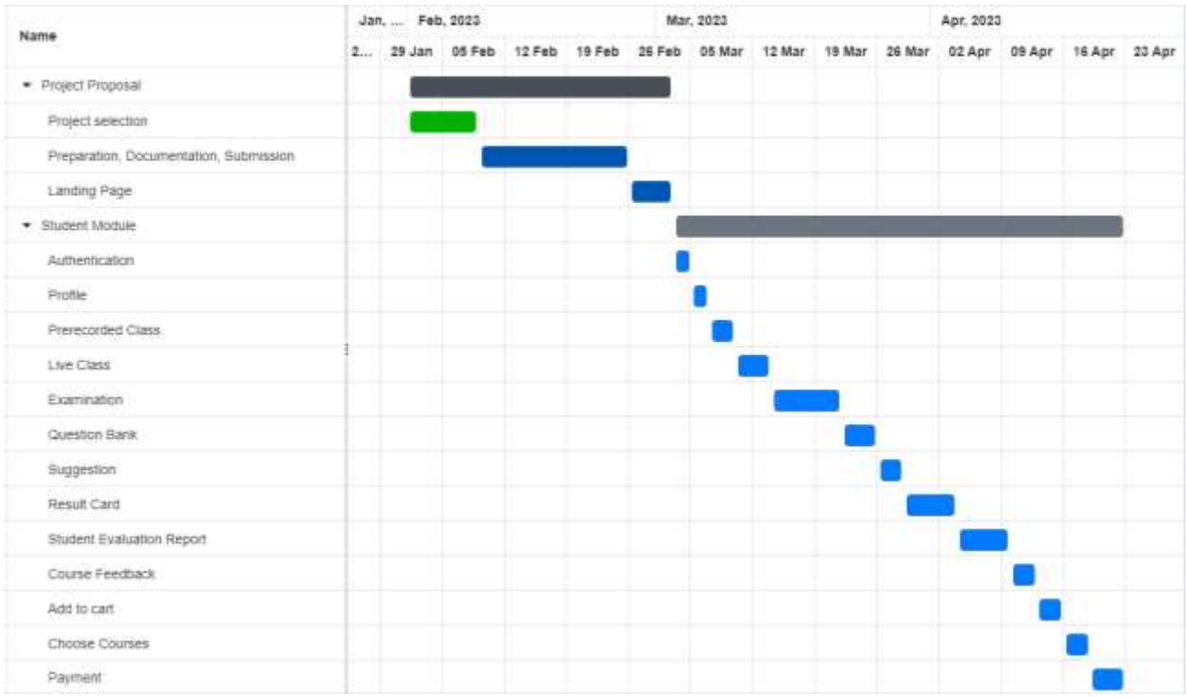


12.4 Software Requirements :

1) IDE- Visual Studio

2) Web Browser

13. Gantt Chart for Completing the Project



14. Future Scope:

Launching this e-learning website has the potential to open up many new opportunities. Here are some future scopes:

- **Developing a successful SaaS product could lead to significant revenue potential and ongoing business opportunities.**
- **Offering the platform to educational institutions and corporations could lead to large-scale adoption and significant impact on the education sector.**
- **The scholarship program could provide much-needed support for talented students who may not otherwise have the resources to pursue their education.**
- **The incorporation of AI could lead to more effective and personalized learning experiences for students, and could also help teachers identify areas where students may be struggling or excelling.**

Overall, it seems that there is significant potential for this e-learning website to have a positive impact on education and learning, and to lead to new business opportunities and advancements in the field.

15. References:

Anido-Rifón, L., Santos-Gago, J.M., & Gil-Solla, A. (Eds.). (2020). Educating for a New Future: Making Sense of Technology-Enhanced Learning Adoption. Springer International Publishing. ISBN 978-3-031-16290-9.

Norling, E., & de Laat, M. (2021). Ethical Considerations in AI-Enabled Learning Analytics. In D. Ifenthaler, N. Krämer, & M. Maina (Eds.), Responsible Learning Analytics: A Call to Action (pp. 3-15). Springer International Publishing. DOI: 10.1007/978-3-030-86436-1_1

Rosales, L.A.E., Morales, R.A., Cruz-Benito, J., & Iglesias, C.A. (2021). Learning Analytics for Collaborative Learning: A Study of the Relationship Between Student Engagement and Group Performance. In D. Ifenthaler, N. Krämer, & M. Maina (Eds.), Responsible Learning Analytics: A Call to Action (pp. 399-414). Springer International Publishing. DOI: 10.1007/978-3-030-86436-1_28.

Fish, Lynn. (2015). Undergraduate Students Computer-Managed Homework Versus In-Class Performance for Different Testing Formats.. Business Education Innovation Journal. 7.

Rosales, L.A.E., Morales, R.A., Cruz-Benito, J., & Iglesias, C.A. (2021). Learning Analytics for Collaborative Learning: A Study of the Relationship Between Student Engagement and Group Performance. In D. Ifenthaler, N. Krämer, & M. Maina (Eds.), Responsible Learning Analytics: A Call to Action (pp. 399-414). Springer International Publishing. DOI: 10.1007/978-3-030-86436-1_28.

16. List of Courses So Far Taken:

Sl. No.	Course Code	Course Title	Credit	Letter Grade	Grade Point	CGPA
1	CSE 6003	Software Quality Management	3.00	A	4.00	
2	CSE 6009	Advanced Artificial Intelligence	3.00	C	2.00	
3	CSE 5001	Object Oriented Programming	3.00	B+	3.33	
4	CSE 6143	Smart Phone Application Development	3.00	B+	3.33	
5	CSE 6147	Software Project Management	3.00	A	4.00	
6	CSE 6207	Data Analytics	3.00			
7	CSE 5031	Data Structure and Algorithm	3.00			
8	CSE 6000 (P3)	Project	3.00			

I hereby would like to declare that my project work has no relationship *(either partially or fully)* with my office work. In future if any objection raised by my office against this work, UIU will not be responsible. In that case, I solely will be responsible for any claim against my project work and will accept any action taken by the authority of any kinds.

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Signature of the Student

_____	_____	_____
Signature of the Supervisor	Signature of the Co-Supervisor	Signature of the MSCSE Director