

Technology

Supabase¹ is an open-source alternative to Firebase, which is a popular cloud Backend-as-a-Service. Supabase is open source, so that developers can create a self-hosted solution using Supabase as its base. Supabase offers many functionalities out of the box which developers can utilize to build an application relatively quickly, such as authentication², database³, storage bucket⁴, and real-time server⁵ which can broadcast changes in database via websocket.

Application

The application name is CourseLMS. Where student and lecturer can interact via chat room, forums, and assignments. All users can authenticate via Supabase authentication.

Application users are divided into three major roles: admin, lecturer, and student.

User Roles	Feature	Technology
Admin	<ul style="list-style-type: none">• Manage admins.• Manage lecturers.• Manage students.• Manage courses.• Manage course materials.• Manage course transactions.• Manage student class transactions.	<ul style="list-style-type: none">• Database.• Database.• Database.• Database.• Database.• Database.• Database.
Lecturer	<ul style="list-style-type: none">• Manage forums.• Manager assignments.• Manage student grades.• View teaching schedules.• Manage student attendance.• View student private messages.• Open chat room.• Create announcements.• Manage quizzes.	<ul style="list-style-type: none">• Database + storage.• Database + storage.• Database.• Database.• Database.• Database + real-time + storage.• Database + real-time.• Database + real-time.• Database + real-time + storage.
Student	<ul style="list-style-type: none">• Reply to forum.	<ul style="list-style-type: none">• Database + storage.

¹ <https://supabase.io/>

² <https://supabase.io/auth>

³ <https://supabase.io/database>

⁴ <https://supabase.io/storage>

⁵ <https://supabase.io/docs/guides/database#realtime>

	<ul style="list-style-type: none">• Upload assignment file.• View grades and notes from lecturers.• View class schedules.• View attendance.• Send private message to lecturers.• Join & send message in chat room.• View announcements.• Play and view quiz result.	<ul style="list-style-type: none">• Database + storage.• Database.• Database.• Database.• Database + real-time.• Database + real-time + storage.• Database + real-time.• Database + real-time.
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