

Problem

- **Struggling Students** who have difficulties with study planning, time management, and consistent practice.
- **Busy Learners** who can't get time to do extensive review/learning.
- **Instructors** that need a quick way to support students without redoing entire lesson.
- **It matters** because one person can easily fall into any of these categories

Our Solution

Make an AI Study Assistant tool that can help you learn material in engaging and simple ways. It should be:

- **Engaging** and interactive with users
- **Simple** and straightforward to use
- **Personalized** with recommendations and progress

Anyone should be able to use this product if they have an internet connection and create an account.

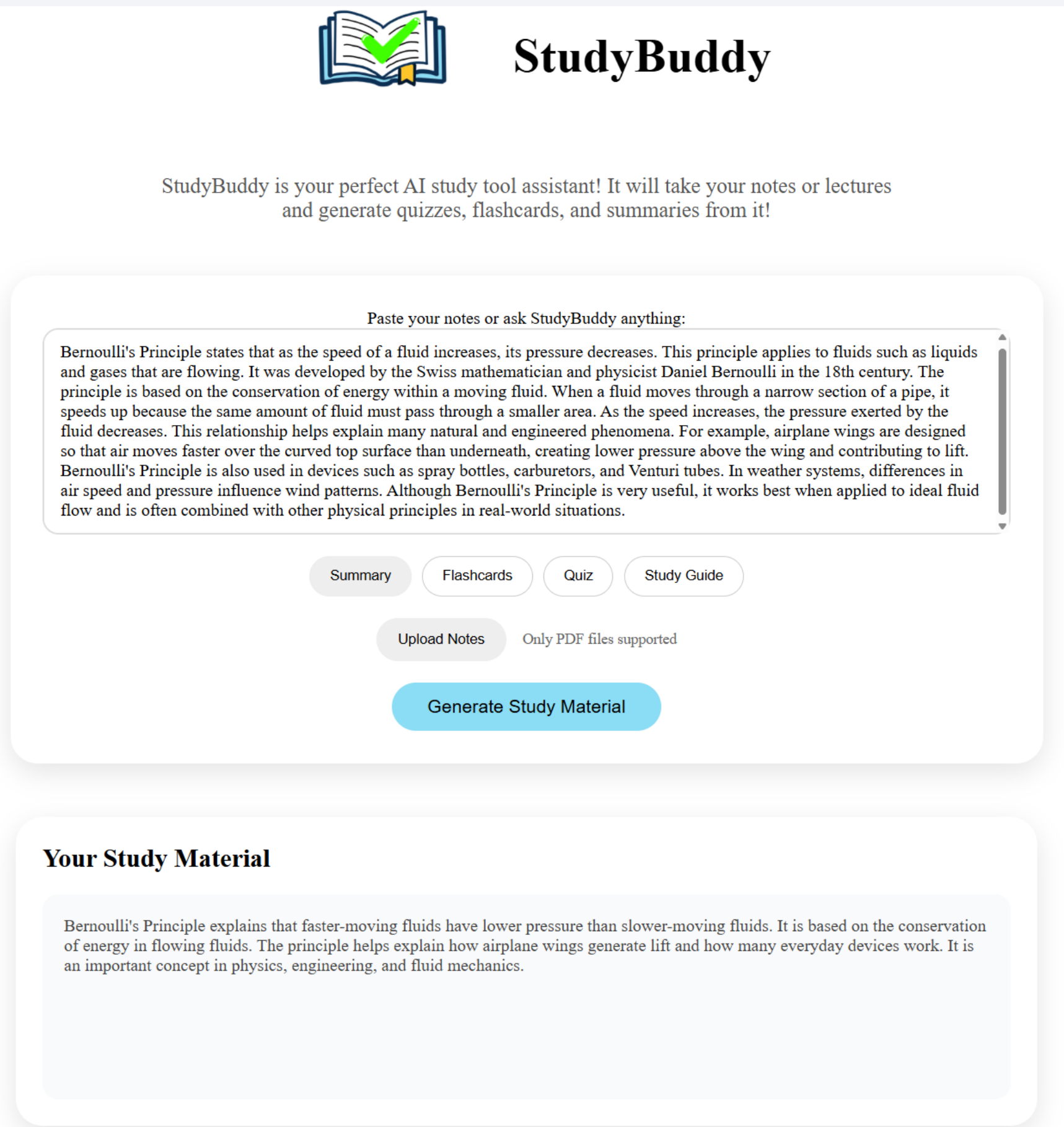
Stakeholders & Requirements

- Stakeholders**
 - College and High School Students
 - Instructors and Tutors
 - Independent Learners
- Requirements**
 - User Registration and Login
 - Upload or Enter Study Notes
 - Generate AI Summaries
 - Create Flashcards
 - Generate Multiple-Choice Quizzes
 - Save Study Materials

Engineering Process (SO6)

- **SDLC phases you followed:**
 - Our project followed the Agile Scrum SDLC, with daily meetings reporting progress, weekly meetings checking if our current work is acceptable and what is completed, and biweekly meetings presenting completed parts, efficiency reports, and health checks.
- **Key requirements & design decisions:**
 - Implement User Authentication (Login/Register)
 - Generate AI-powered summaries, flashcards, and quizzes using Google Gemini
 - Store user data and notes using SQLite
- **Testing & evaluation highlights:**
 - Verified successful user registration and login
 - Validated AI-Generated summaries, flashcards, and quizzes with multiple sample sets.

Demo & Screenshots



Above: Image of notes being summarized and returned to user.
Below: Image of the login page refusing wrong login credentials.

Account Login

Username or Email

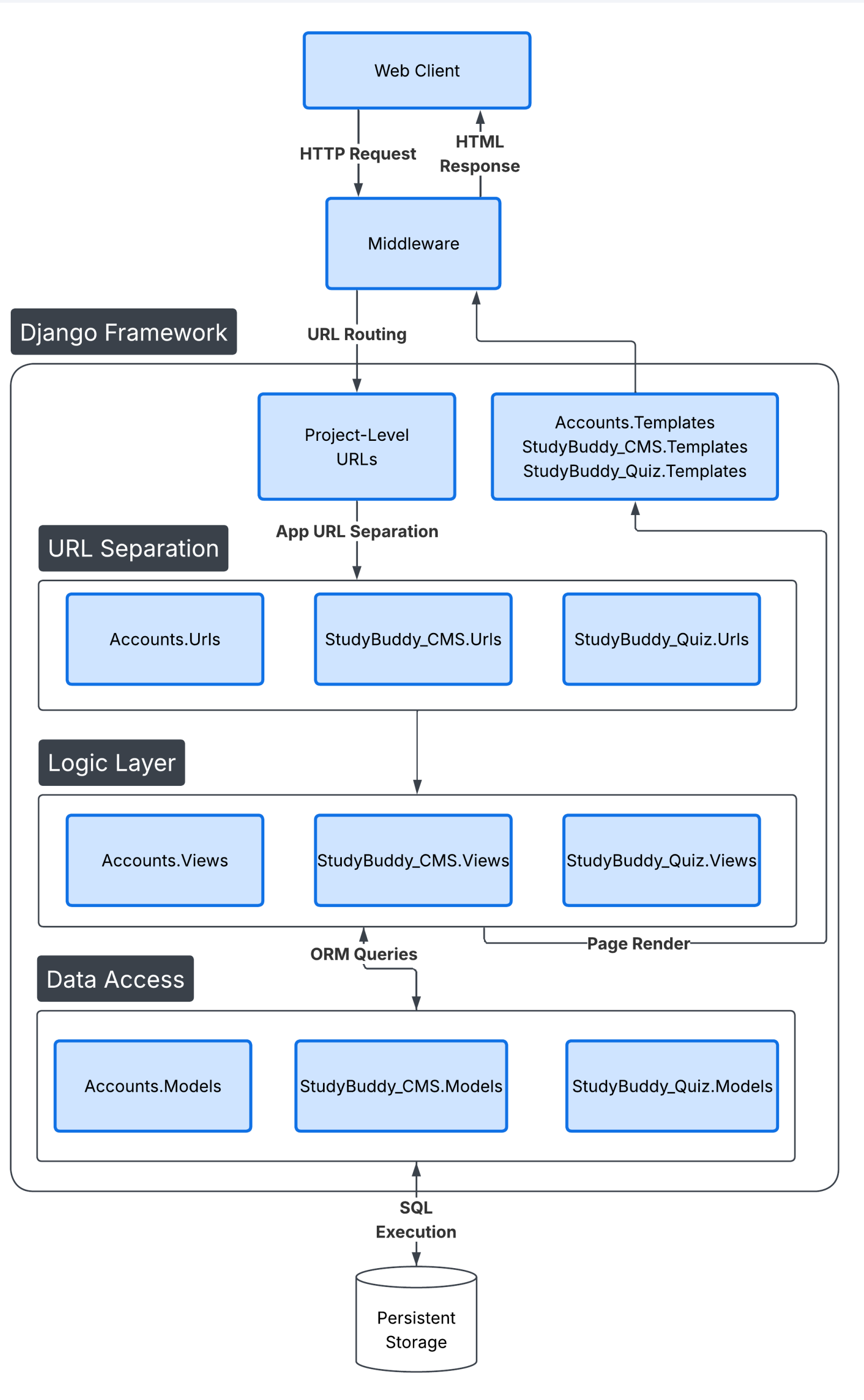
Password

Login

Don't have an account? [Sign up](#)

Invalid username or password.

Architecture



The primary architecture is a form similar to Model-View-Controller (MVC) called MVT, where “M” represents the Models (Data Access), “V” represents the Views (Logic Layer), and “T” represents the Templates that display on the user’s page. The secondary architecture is Active Record, where each model represents a table in the database, and each instance of the model represents a row in that table.

Results & Evaluation

- We tested creation of user accounts and summaries, quizzes, and flashcard from sample text input. AI returns information with slight variances in word choices so exact output cannot be predicted, but we can still manually validate the response.
- Results**
 - AI Summary generation completed within 5 seconds.
 - 5-flashcard-generation completed within 7 seconds.
 - Quiz generation completed within 7 seconds.
 - Authentication validated login within 2 seconds.

Evaluations

- AI content generation within reasonable user wait times.
- User authentication properly works, with low wait time.

What's Next

- Finish PDF upload support.
- Improve AI-Generated Quizzes.
- Deploy application on functional website.
- Develop mobile application version or mobile web support.

People & Acknowledgments

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Product Owner: Samuel Gamon
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