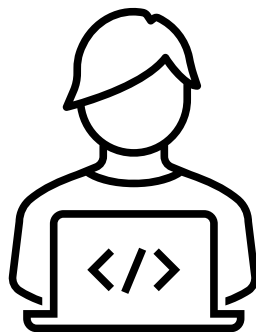




An online learning platform for Programming Courses

Problem Formulation



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Problem formulation

In the field of programming, students and professionals often face challenges in finding high-quality, tailored online learning resources. The lack of accessible and specialized content can lead to frustration, discouraging learners from advancing their skills in areas like web development, mobile development, and game development.

Furthermore, there is a need for platforms that effectively balance efficient course management for instructors with a seamless user experience for students. While students desire a user-friendly experience for browsing, purchasing, and engaging with course materials, instructors require straightforward tools for organizing and managing their courses.

Existing solutions are frequently too costly, overly complex, or not specifically tailored for programming courses, limiting accessibility and impacting students' learning experiences.

To address these challenges, **StudyJet** has been conceptualized with the following guiding questions:

- How can Angular and Bootstrap CSS be effectively utilized to design a responsive and user-friendly interface that supports effortless course browsing, purchasing, and learning?
- How can ASP.NET Identity and JWT tokens be integrated with ASP.NET Web API to securely manage user authentication and enforce role-based access control for different user types (admin, student, instructor)?
- How can Stripe's sandbox environment be integrated to provide secure, flexible, and user-friendly payment processing, using the default test card provided by Stripe?
- How can SQL be used to structure and manage data related to users, courses, purchases, roles, cart, and Wishlist efficiently to support the platform's core functionality?
- What key features, such as a Wishlist for saving courses of interest and a Cart for managing intended purchases, can be implemented using SQL and frontend technologies to enhance the user's learning experience??