Project Report: DYSEnglish

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1. Introduction

DYSEnglish is an educational platform designed to help Kazakh-speaking users learn English. The platform offers both free and paid courses, downloadable materials, quizzes, and blogs. It also includes an admin panel for managing platform content and user interactions.

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2. Features and Functionality

2.1 Main Page (`Бастапқы бет`)

- Provides options to purchase a paid course or access free courses.

2.2 Course Page (`Курс беті`)

- Displays course options and allows users to proceed with their preferred type (paid or free).

2.3 Materials Page (`Материалдар`)

- Users can download learning materials uploaded by admins.

2.4 Blog Page (`Блог`)

- Accessible only after user authentication, containing posts and updates.

2.5 Contact Page (`Байланыс беті`)

- Displays basic platform information and contact details.

2.6 Authentication (`Тіркелу және Кіру`)

- Enables users to register, log in, and access restricted features.

2.7 Quizzes (`Квиздер`)

- Provides quizzes for users to test their knowledge. Admins manage these through the admin panel.

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3. Technologies Used

The DYSEnglish platform was developed using the following technologies:

- **Backend**:
  - **Node.js**: Used to build the server-side logic of the application.

- **Express.js**: A fast and lightweight framework for creating APIs and managing routes.

- **Frontend**:
  - **EJS (Embedded JavaScript)**: A templating engine used to dynamically render HTML pages with server-side data.
  - Example: Dynamic content like course lists, blogs, and user profiles are injected into EJS templates.
- **Database**:
  - **MongoDB**: A NoSQL database used to store data such as user profiles, quizzes, course details, and downloadable materials.
  - Example: Materials uploaded through the admin panel are saved in MongoDB and retrieved for user access.
- **File Structure**:
  - Organized into `views`, `models`, and `routes` for better maintainability.
  - Example:

```
views/
  blocks/
    header.ejs
    nav.ejs
  main.ejs
  courses.ejs
  materials.ejs
  blog.ejs
  contact.ejs
  register.ejs
  login.ejs
  quiz.ejs
models/
  user.js
  quiz.js
  materials.js
routes/
  quiz.js
  user.js
  materials.js
```

Admin Panel:
  - Built with Node.js and EJS, allowing administrators to upload materials, create quizzes, and manage platform content.

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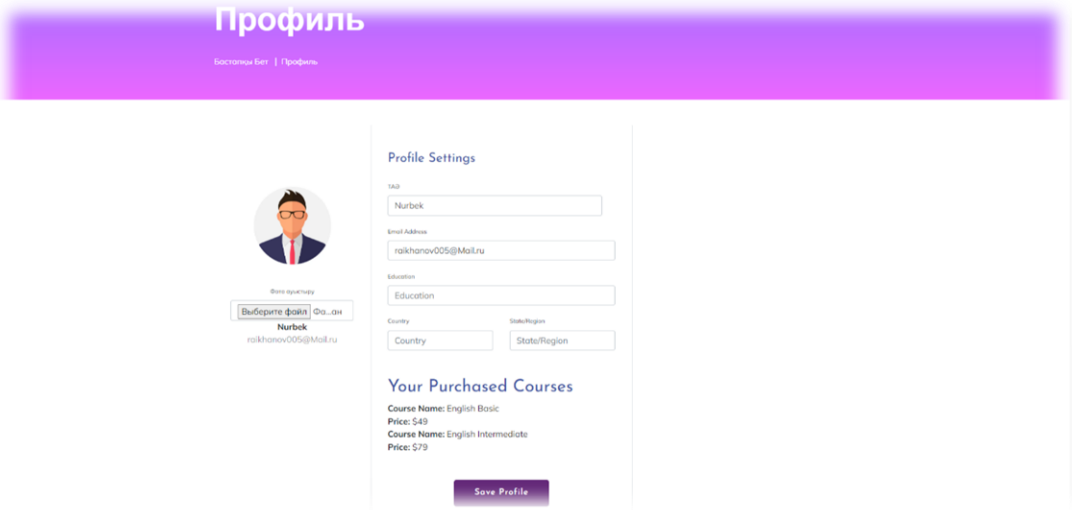
4. Implementation Details

- **Dynamic Rendering**: EJS templates dynamically render data from MongoDB, ensuring pages are always up to date.
- **Routing**: Express.js routes handle user requests and responses efficiently.
  Example:
  - `/courses`: Displays a list of courses.
  - `/quiz`: Allows users to take quizzes.
- **Data Flow**:
  1. User interacts with the UI (EJS-rendered pages).
  2. Requests are sent to the server (Node.js).
  3. Data is fetched or updated in MongoDB.

4. The server sends the updated data back to the client to render.



Pic 1. Example of an EJS page with dynamic content.

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5. User Workflow

1. **Registration/Login**: Users sign up or log in to access features like quizzes and blogs.
2. **Course Navigation**: Users choose between free and paid courses.
3. **Material Access**: Users download resources uploaded by admins.
4. **Quizzes**: Users take quizzes, enhancing their learning experience.

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6. Challenges and Solutions

1. **Challenge**: Managing dynamic content for different user types (e.g., admins vs regular users).
    - **Solution**: Used role-based access control in Node.js to differentiate user permissions.
2. **Challenge**: Displaying real-time content updates from MongoDB.
    - **Solution**: Integrated EJS for rendering templates dynamically based on database updates.

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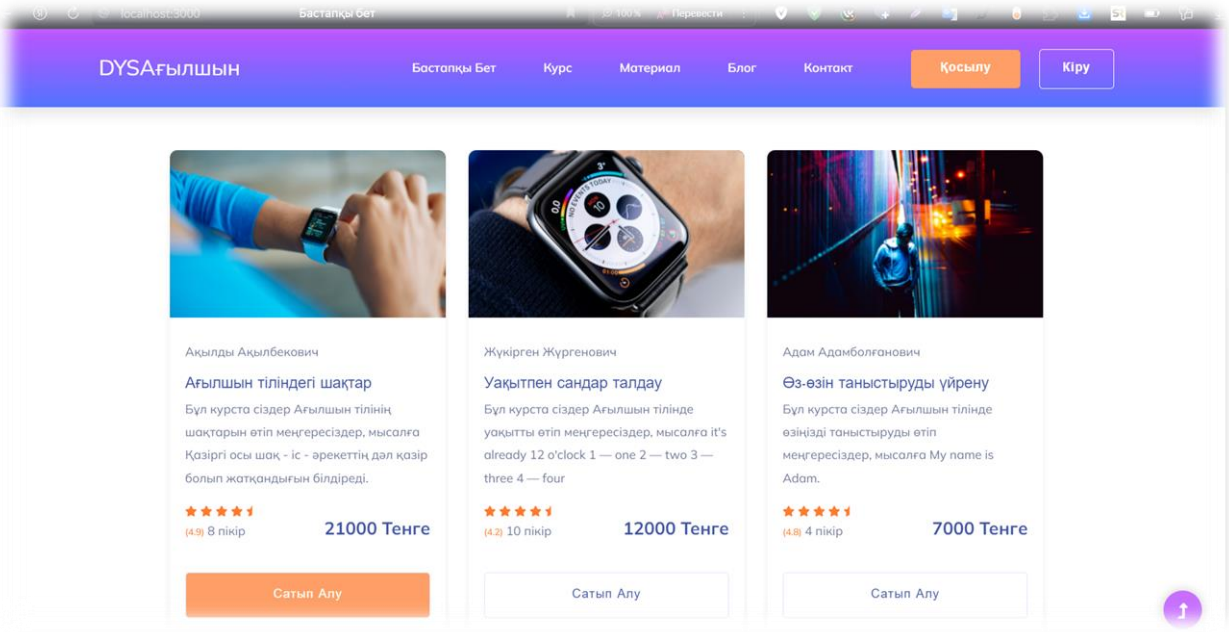
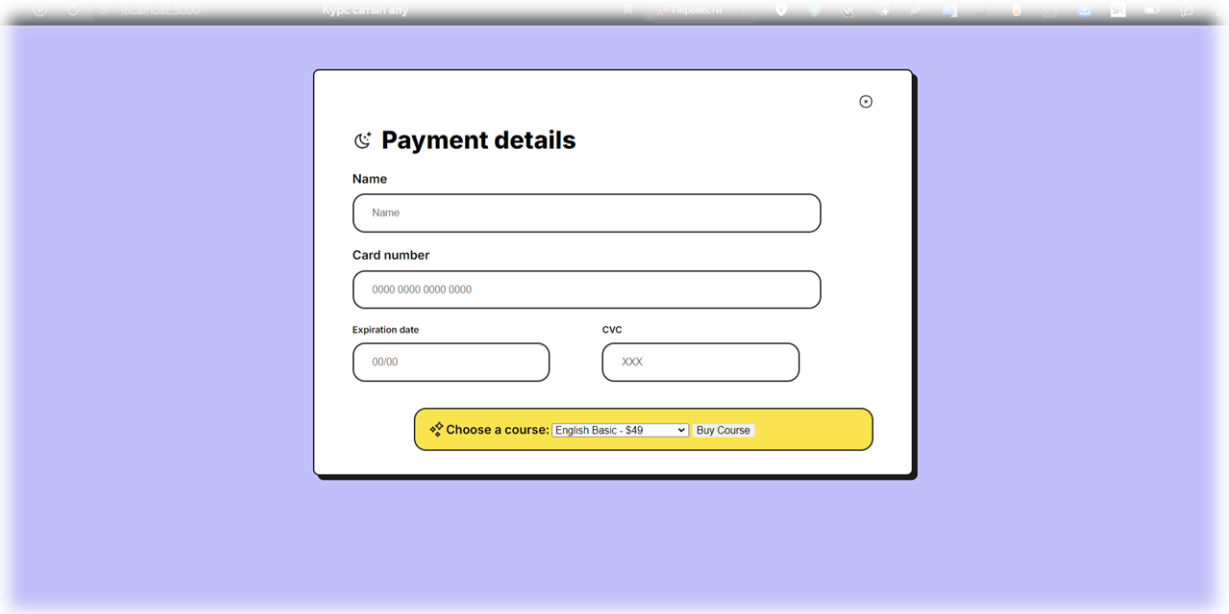
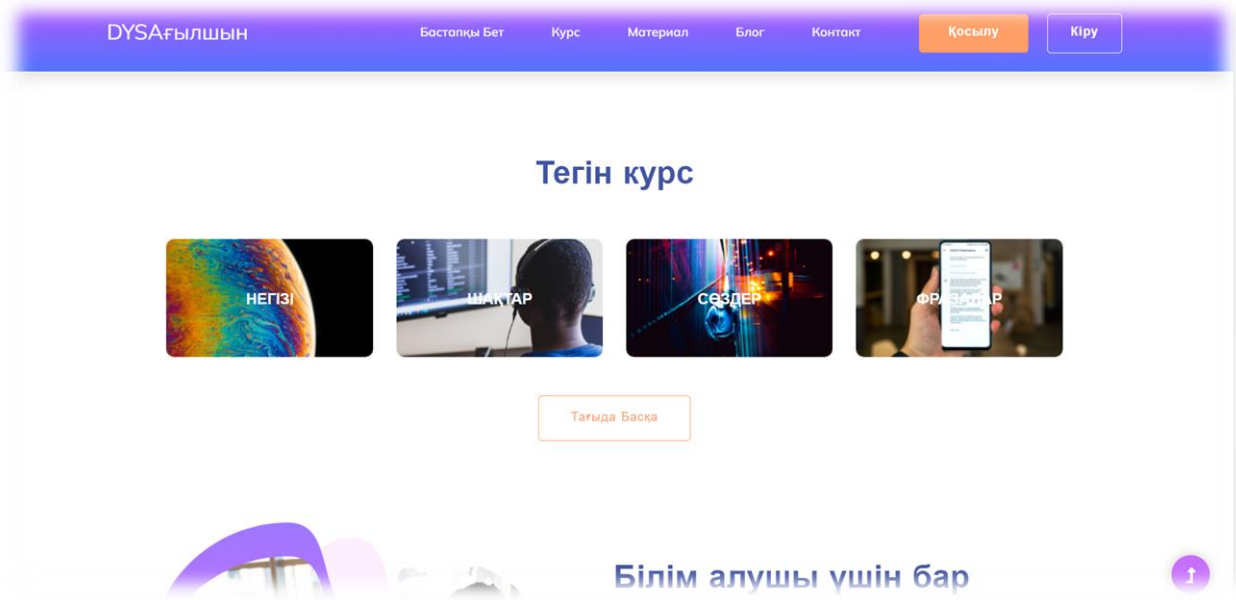
7. Screenshots



Pic 2. Course

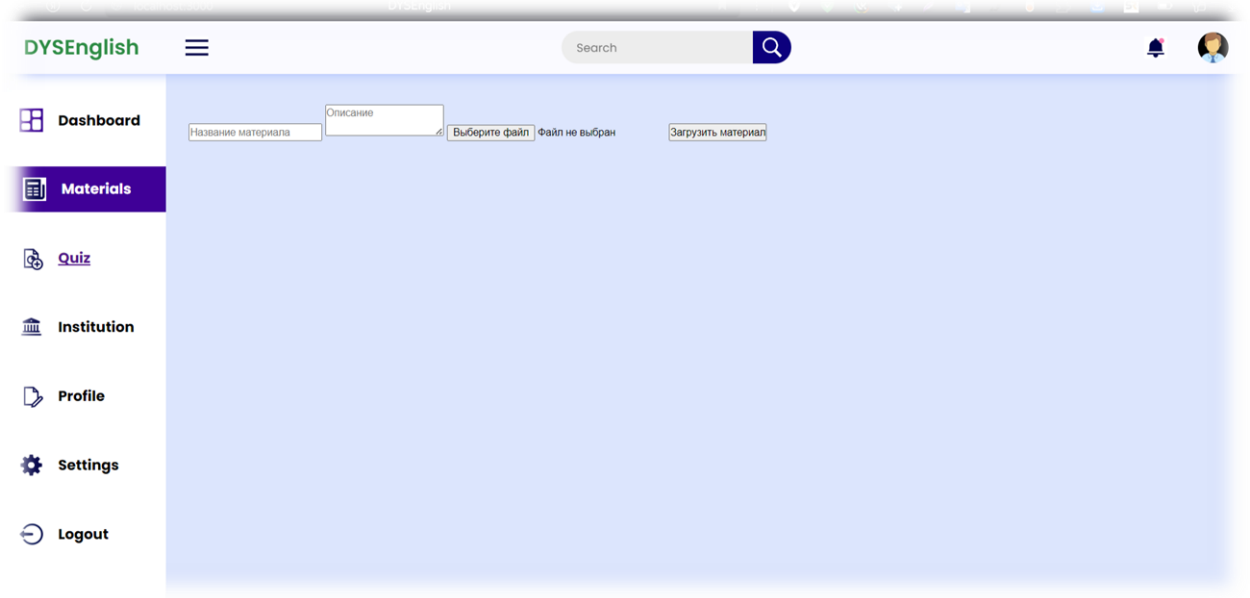


Pic 2. Buy Course

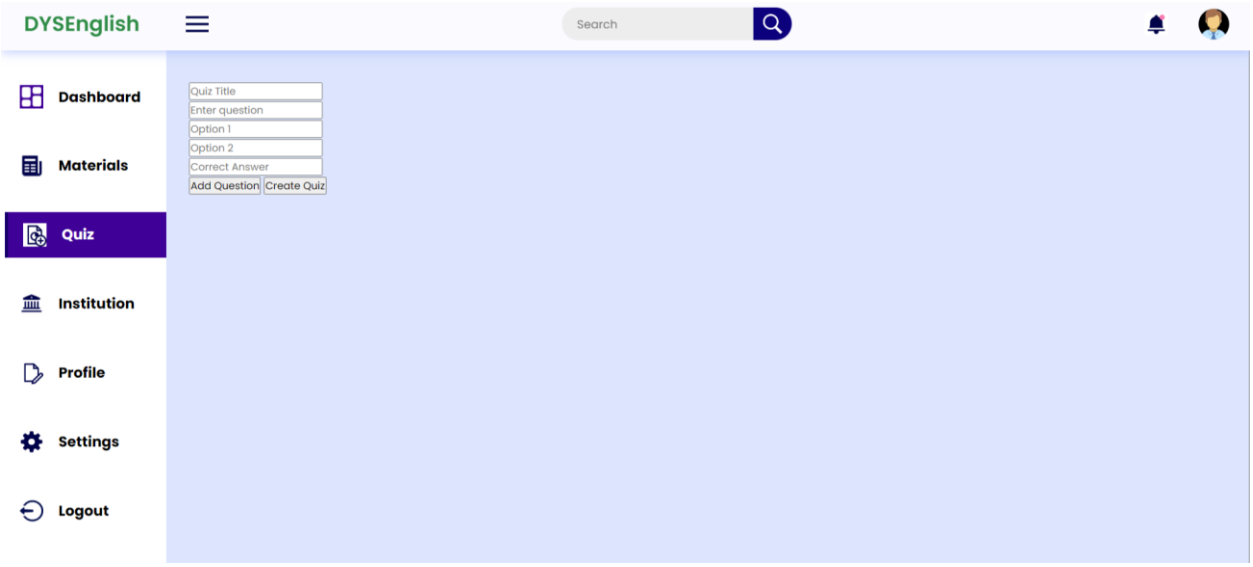


Pic 3. Free course

Pic 4. Materials



Pic 5. Admin Panels for upload materials



Pic 6. Admin Panels for upload Course

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8. Conclusion

DYSEnglish is a user-friendly platform for learning English, offering a variety of features to enhance user experience. By utilizing Node.js, Express.js, EJS, and MongoDB, the platform achieves dynamic content delivery and efficient data management. Future improvements could include advanced analytics for user progress and a mobile-friendly design.