

Easy QS

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CASE STUDY



EasyQS

Develop a user-friendly web application to manage and report costs for construction companies. Inspired by Procore but simplified, the goal was to provide an efficient tool for tracking project costs, with multi-company support, without overwhelming users with complexity.

- **Company-Specific Login:** Each company views only its data.
- **Project Creation:** Companies can create projects with details like name, location, and timeline.
- **Supply Chain Database:** Users can manually add and manage suppliers.
- **Cost Reporting Module:** Schedule of costs tailored to each company and project.
- **Order Tracking:** Enables users to add purchase/subcontract orders linked to the supply chain and cost schedule.
- **User Packages Module:** Manage different subscription packages (Bronze, Silver, Gold, Free).
- **Company Projects Module:** Track costs, project count, and key metrics (e.g., committed and incurred costs, profit to cost).
- **Members and Tasks Module:** Track team members and assigned tasks.
- **Supply Chain and Commodity Tracking:** Manage suppliers and cost details for each project.
- **Revenue Reports:** View contract works and variations.
- **Incurred Cost Details:** Track invoices and timesheets.
- **Admin and Settings Module:** Manage admin profiles and app settings.
- **Subscription Model :** Bronze, Silver, and Gold packages allow varying user access, with limits based on subscription tiers. Admin users assign team members to specific projects.

| Incurred Cost ID | Cost Type | Date Raised | Raised By | Supplier Name | Order Value | Action |
|------------------|-----------|-------------|--------------|--------------------|-------------|--------|
| 1 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
| 2 | Timesheet | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
| 3 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
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| 8 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
| 9 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
| 10 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
| 11 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
| 12 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |
| 13 | Invoice | 23-01-2023 | Josh Howarth | ToolTech Solutions | £54,612.00 | |

Challenges and Solution



- **Ensuring a Seamless User Experience**

The challenge was to maintain a consistent and appealing design across all devices. Rigorous testing was conducted to refine the user interface, ensuring it met high aesthetic and functional standards.

- **Integration of Payment Systems**

To enhance security and trust, we implemented robust payment gateways, ensuring compliance with industry standards for data protection.

- **Cross-Platform Compatibility**

Developing the app for both Unix and Windows with a unified user experience was essential. Utilizing node modules allowed us to efficiently develop for both platforms while ensuring high performance and smooth functionality.

- **End to End Security**

JSON Web Tokens (JWT) are a compact, URL-safe means of representing claims to be transferred between two parties. JWT provides a powerful method for securing authentication in Node.js applications. Its stateless nature, combined with signature verification and customizable claims, makes it an excellent choice for modern web applications. By implementing JWT correctly, developers can enhance the security of their applications while providing a seamless user experience. We always follow best practices, such as using strong secret keys, implementing token expiration, and securing storage mechanisms.

Technologies Used



- **Cloud Hosting** – AWS (Amazon Web Services) for reliable and scalable cloud infrastructure.
- **Backend Development:** Node.js and MySQL for scalability and real-time interactions.
- **Frontend Development:** Angular for seamless front end development.
- **Payment Integration:** Stripe for secure transactions and tipping.
- **Geo-Location Services:** Google Maps API for accurate and real-time location tracking
- **SSL Certification** – For secure data transmission and encryption of user information.
- **Push Notifications** – Firebase Cloud Messaging for real-time notifications.
- **User Data Encryption** – AES-256 encryption for protecting user data at rest and in transit.
- **Real-Time Messaging** – WebSocket protocol for instant communication between users.

Technologies Used



Cloud hosting
AWS (Amazon Web Services) for reliable and scalable cloud infrastructure.



User Data Encryption
AES-256 encryption for protecting user data at rest and in transit.



Node JS
Single Thread Back-End able to withstand thousand request per second.



My SQL
Seamless Relational Database with Atomicity, Concurrency, Integrity and Durability.



Google Maps

Google Maps
Navigate your world with Google Maps—where every journey starts with a tap!



Firebase
Build fast, scale effortlessly, and connect with confidence!



Stripe
Where Payments Flow Seamlessly!



Angular
AngularJS: Building Dynamic Web Apps with Ease.

Commercial Benefits



- Simplicity: Unlike Procore, the system was designed for a straightforward experience, minimizing unnecessary complexity.
- Custom Cost Scheduling: Flexible input for cost headings allows customization per company.
- Committed Cost Tracking: Users can track real-time financial commitments for each project.
- Scalability: Built to grow with companies, offering multiple tiers of access and functionality.
- The web app has provided a streamlined cost management solution for construction companies, allowing them to track project expenses, manage suppliers easily, and report costs, all in an intuitive and scalable environment. This system has offered a unique value proposition for smaller companies needing a simple yet powerful solution to manage their projects.

Explore the Platform

Check out the platform <https://www.easyqs.co.uk/home> for more insights into how it supports construction cost reporting



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