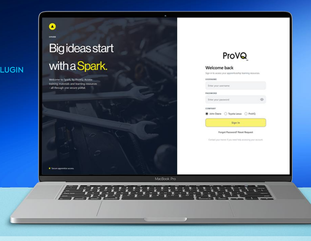
CASE STUDY

Spark - ProVQ Apprenticeship Portal

A PRIVATE APPRENTICESHIP LEARNING PORTAL BUILT AS A MODULAR WORDPRESS PLUGIN

A private apprenticeship learning portal built as a modular WordPress plugin. Spark enables administrators to manage employer companies, apprentices, and learning resources, while apprentices access company-assigned materials through a branded frontend portal.



TECH STACK WE USED

WordPress · PHP · MySQL · HTML · JavaScript

01 OVERVIEW

Private Apprenticeship Learning Portal

Spark is a custom WordPress plugin for managing apprenticeship programmes across multiple employer companies. Administrators manage companies, apprentice accounts, and training resources from WordPress admin. Each apprentice signs in to a branded frontend portal and can access only the resources assigned to their employer company.

Modular Architecture

The implementation follows a modular monolith architecture: a core plugin and module manager initialize independent modules.

Company-Based Access

Each apprentice can access only the resources assigned to their employer company.

Event-Driven Communication

Modules communicate through custom WordPress actions for event-driven tasks such as email notifications and audit logging.

LIVE LINK
https://provq.com/spark/

INDUSTRY
EdTech

PLATFORM
WordPress

02 PAIN POINTS

Challenges Confronted

Managing Complex Apprenticeship Operations



01 Managing company-specific learning resources while ensuring apprentices access only their assigned materials.
Multi-Company Resource Management

02 Handling apprentice accounts, activity records, activation, deactivation, and password-reset requests efficiently.
Plugin Dependency Risks

03 Preventing unauthorized access through company-based permissions, inactive-account restrictions, and login rate limiting.
Secure Portal Access

04 Supporting documents, images, audio, and video within one centralized apprenticeship learning portal.
Multiple Learning Resource Formats

05 Processing chunked video uploads into optimized MP4 and HLS formats for browser playback.
Video Upload & Processing

06 Coordinating independent plugin modules while supporting notifications and audit logging through WordPress actions.
Modular Plugin Management

03 SOLUTIONS

Solution Provided

A Centralized Apprenticeship Management System



1/ WordPress Admin Dashboard
Centralized dashboard for managing apprentices, companies, trainers, activity summaries, and administrative operations.

2/ Company & Resource Management
Organized company profiles and learning resources with company assignments, categories, tags, and publishing controls.

3/ Branded Apprentice Portal
Dedicated frontend portal with branded login, dashboard, resources, company information, and profile sections.

4/ Resource Discovery & Viewing
Enabled resource search, filtering, sorting, pagination, and in-portal document, image, and video viewing.

5/ Secure Access & Activity Tracking
Implemented company-based authorization, inactive-account restrictions, login rate limiting, progress tracking, and audit logging.

6/ Video Management
Introduced chunked uploads and background FFmpeg processing for optimized MP4 and HLS playback.

04 TECH STACK

Powered By Scalable Technology

The supplied documentation states that there are no third-party PHP packages required. Composer autoloading is optional; the plugin includes a built-in autoloader.

Platform
WordPress

Backend
PHP · WordPress Plugin API

Data
MySQL · WordPress custom post types · user meta

Frontend
HTML · CSS · JavaScript · jQuery

Asynchronous requests
WordPress AJAX (admin-ajax.php)

Video processing
FFmpeg · MP4 · FFprobe · HLS

Video playback
hls.js

DOCX preview
docx-preview · JSZip

Admin lists
WordPress WP_List_Table



05 RESULTS

Results & Impact Metrics

A Unified Apprenticeship Learning Experience



CENTRALIZED ADMINISTRATION
Administrators manage employer companies, apprentice accounts, and training resources from WordPress admin.

COMPANY-SPECIFIC LEARNING ACCESS
Each apprentice signs in to a branded frontend portal and can access only the resources assigned to their employer company.

FLEXIBLE RESOURCE DELIVERY
The plugin supports documents, images, audio, and video resources, including in-portal PDF, image, DOCX, and video viewing.

OPTIMIZED VIDEO PLAYBACK
Uploaded videos can be processed in the background into optimized MP4 and HLS formats for browser playback.

CONTROLLED ACCOUNT ACCESS
Inactive apprentices are prevented from logging in and accessing resources. Protected resource requests include company membership checks.

ACTIVITY MONITORING
Resource-open progress tracking and audit logging support visibility into apprentice activity and supported account and resource events.

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www.thecodersmind.com

Google Reviews 4.6 ★★★★½ | Clutch Reviews 4.9 ★★★★½ | Upwork Reviews 100%JSS | Dribbble Reviews 4.9 ★★★★½ | Behance Reviews 5.0 ★★★★½ | PPH Reviews 4.9 ★★★★½

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