ALTEN CALSOFTLABS
AN ALTEN GROUP COMPANY

Intelligent Learning Platform Development For a Leading Education Provider

THE CLIENT

The client creates engaging educational content that simplifies concepts and delivers them in multiple modes, recognizing the varied learning styles and cognitive abilities of individuals.

BUSINESS NEED

The client wanted to deliver effective and collaborative online learning while simultaneously developing an Intelligent Learning Platform ("ILP") that can create individualized learning paths after assessing the relative strengths and weaknesses of a student. Students are allowed to register themselves to the courses which are configured for self-enrollment with two different versions of the same course. Free version has limited access to the course materials while the paid version has complete access to the entire courses.

To accomplish this, the client needed a highly flexible and user-friendly learning environment that could be implemented quickly and had the ability to support integrations of desired third-party e-Learning tools. Being precise, the client needed a solution that provided reliable and responsive technical support that could be extended and configured to satisfy the changing needs of a quickly-evolving campus. Third party payment gateway module needs to be developed for upgrading their free version to paid version.

SOLUTION DELIVERED

ALTEN Calsoft Labs ramped up a team of resources who are experienced in building e-Learning solutions and developed a ground up solution. After evaluating many different LMS offerings, the client decided on customized ALTEN Calsoft Labs' Moodle solution, which provided a set of streamlined communication and collaboration features to facilitate use and engagement. The goal was to meet the needs by offering integrations with many third-party features such as RTMPe video streaming, classroom lecture documents, and learning path.

ALTEN Calsoft Labs was responsible in the following areas:

◉ A course in Moodle is an area where students will access the classroom contents like activities & resources after getting enrolled into course.

The client required customization of enrollment process of student into programs (i.e., collection of courses) instead of courses. We achieved this enrollment process by including the ability for admin to set up programs.

◉ We customized the course section to provide a graphical report learning paths by defining a set of activities and their dependences; the order and flow of the activity completion.

◉ We protect video contents by delivering video streaming over Amazon Cloud's RTMPE protocol with SWF verification. For optimal security, the SWF Verification functionality is enabled in Moodle instance. Flash Media Server can verify SWF files running in Flash Player after the client connects to an application. Flash Media Server disconnects any Flash player sending invalid bytes. This verification ensures that only registered students can connect to the application or content on Flash Media Server.

◉ Moodle supports bulk import of quiz questions into question bank in the form of text. During the implementation of Moodle solution, the client had requirement of importing questions which contains mathematical equations.

- We integrated various open source solution into the application to boost up the UI, performance and security.
- Free and Paid version of courses were implemented in order to help students make use of the course with limited activities and Modules in free version and if needed access for the full courses. Student can even go for a paid version.
- PayTM module was developed for payment integration to upgrade the course.

BUSINESS BENEFITS

- Lower Total Cost of Ownership (TCO) through open source technologies
- Intelligent Learning Platform can cater to a wide spectrum of educational segments
- Provides ability to simplify concepts, carry the entire class and lectures that are engaging and fun
- Each course is configurable to allow students enroll as self or payment or manual.

TECHNOLOGY USED

- Web application framework: Moodle
- Database: MySql 5.0.11
- Web server: Apache 2.4.10
- Programming: PHP 5.6.3
- Client Technologies: JavaScript, HTML5, CSS3, JQuery, YUI, Firebug

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