

# Case Study



## COMMUNITY PORTAL FOR HIGH SCHOOL AND COLLEGE STUDENTS



*“Idhasoft is a global world-class organization providing best-of-breed localized business and technology solutions, with continuous innovation and quality backed by best-in-class people”*

## Client Requirement

Aimed towards teenagers and youngsters, the site will be a massive social networking portal which will act as an online scrapbook for high school and college students all over.

The site will emulate the look and feel of a college yearbook by providing youth-centric features like friends & bully lists, dating alerts like flirts & secret admirer lists as well as sections like locker room etc.

The site will provide a thorough online community experience with extensive customization of profile, access to instant messenger & mail, managing favorites and ranking & blocking of members.

User participation will be actively encouraged through different ranking systems, popularity contests, interesting polls and vote battles that users can host or participate in.

The site will promote users to stay active in the community by providing them with through the ability to upload pictures, write blogs and create blurbs.

The site will also be expected to offer search options and creation of groups, forums & events to encourage user participation.

## Challenges

Developing a robust framework for the site which is capable of managing millions of users at the same time without slowing the site down.

Developing and incorporating an extensive list of profile customization options, complex ranking systems and voting contests designed for enhancing users' active participation.

Synchronizing the integrated features like blogs, messenger and mail to function smoothly while being executed simultaneously.

Ensuring easy navigation through the implementation of web usability principles in the website design.

Enabling the site to operate at top speed even in peak traffic hours and maintaining good load balance.

Ensuring safe and secure transfer of data.

## Technologies Used

PHP (Server-side Language)	Most appropriately suited to create dynamic web pages. Enables fast extraction of data out of a database for presenting it on the web page.
JavaScript and AJAX (Client-side Language)	Crossover browser support & faster loading time with light web pages that require no plug-in downloads. Scalable Javascript based controls to provide flexibility and enhance user experience and involvement.
PostgreSQL	Free, highly customizable low-maintenance database management system. Consistently stable in high volume environments. Extensive cross-platform compatibility.
Red Hat Linux	License-free, sturdy platform with powerful multitasking abilities. Open source code allowing for extensive customization.
Rational Rose Enterprise Edition	Integrated tool best suited for modular architecture and iterative development of software.

## Manpower

Project Leader	1
Developers	8
Designers	2
Quality Assurance Testers	2

## Planning

**With prior experience in developing full-fledged community portals, GMI followed a four-layered approach towards development, starting with:**

- o The Database layer containing PostgreSQL Database, Tables, stored procedures and so on.
- o The Data Access layer containing the libraries responsible for accessing data from database.
- o The Business Logic layer consisting of all business logic procedures for modules like User Profiles, Forums and Blogs etc.
- o The User Interface Layer which forms the Graphical User Interface of the website.

## Architecture

PHP and PostgreSQL formed the basis of development as the site was a social networking portal with extensive features and required the 'faster to market' transition of such concepts. User Profiles, Invitations, Forums, Blogs and other modules were developed in PHP such that they can be executed directly from the UI layer. These PHP files consisted of all Business logics used for respective modules like Save (Add/Update), Delete, Get single object, get multiple objects for listing and were designed to be capable of handling many more logics which were not related to the database. The Data Access layer contained the libraries responsible for accessing data from database and built a generic query for insert, update, delete and select, depending on the business class. All business layer components were coded to use this library for data accessing process from database. Stored procedures were used only for complex retrieval of data from multiple tables and were entirely avoided with conditional syntax to ensure smooth performance of the website. The UI layer was kept free of any business logic with images, applications and data being called from their respective servers. Sub-domains were used for the different areas of the website to guarantee scalability.

## Development Highlights

As the portal was targeted towards the youth, numerous areas of active interest for the teens were included. The site was made rich with daily contests, popularity battles and voting polls. Different ranking factors like stars and an amusing category of superlatives were incorporated to enhance user participation. Various personalization options for the profile and the integration of numerous Flash tools allowed users to portray themselves accurately and creatively. Users could also create different lists for friends, bullies, flirts and secret admirers etc. A locker room section provided users with the functionality of storing items of interest. User status, user statistics and other user-related validations were faultlessly managed to provide instant access to a range of fun-filled features. Optimized query features offered greater freedom in narrowing down information through comprehensive search criteria. Another development highlight was into the portal. Stringent precautionary measures were taken to ensure maximum security with regards to SQL injections. Web usability guidelines were strictly followed during development and the interface was made easily navigable through judicious use of AJAX, CSS and HTML controls. The site was developed and fully functional within a span of 8 months.

## Client Feedback

“I have been extremely impressed with GMI. My project was extremely complicated. I have worked with GMI for over a year now. GMI team was available at all times to answer my questions and the team of programmers made excellent progress and completed each phase of the project in a timely manner. As a result of their excellence, I gave them increasing amounts of work and continue to work with GMI. The reason I initially chose GMI, was the quality of the work I saw. I am very happy I made the decision I did. It was the most important and successful early business decision I've made. Since then, my site has made the Alexa mover and shaker list and is growing by many thousands of users a day. The thing that separates GMI is their reliability, they get the work done and then they continue to support it. GMI team takes the long-term view of the client realizing that the trick is not completing a project and moving on to the next client but continuing to support the client and earning additional work each time.”