GREY MATTER INDIA TECHNOLOGIES PRIVATE LIMITED

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CASE STUDY

COMMUNITY NETWORKING SYSTEM FOR SOCIAL GROUPS

CLIENT REQUIREMENT

The client required a comprehensive social networking portal capable of connecting registered users to numerous group networks present online. The site would act as a active online community where registered users can find jobs, advertise, participate in various events or simply connect with friends. A search feature would be included for users to locate groups, individuals, jobs and events based on different criteria. Extensive features like customization of profiles, access to mails, managing favourites and ranking & blocking of members to facilitate maximum user interaction would be also included in the site.

CHALLENGES

- Developing a site with a reliable framework to balance the load of millions of users accessing the services simultaneously.
- Instant connection of users with groups, individuals, events and other happenings across the web through the implementation of a reliable framework.
- Synchronization and incorporation of an extensive list of features designed for enhancing the user's community networking experience.
- Provision and maintenance of the database of a range of interactive features like mail service, blogs and forums to ensure user participation.
- Incorporation of web usability principles in the website design to ensure easy navigation for all types of users.
- Ensuring data and content security.

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)	(Client-side Language) Cross 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.
MySQL Engine	A versatile low maintenance database management system which acts as a cross-platform compatible database component of the LAMP platform.
Red Hat Linux	License free, sturdy platform with open source code for extensive customization and with powerful multitasking abilities.

Apache Web Server	Server Ideal for serving static as well as dynamic content on the web in a safe and secure manner. Supports a variety of features while offering extendable core functionality

MANPOWER

Project Leader	1
Developers	4
Designers	2
Quality Assurance Testers	2

PLANNING

The enormous structure of the website and the challenges involved necessitated the adoption of a four-tier approach that consisted of

- MySQL Server Database, Tables, stored procedures etc... incorporated within the database layer
- Conversion of data between incompatible type systems in databases and accessing data from the database for the Interface layer and Database Abstraction layer respectively.
- All the business logic procedures for modules such as User Profiles, Invitations, Forums and Blogs etc... forming the Business Logic Layer.
- The GUI of the website formed by the User Interface layer

ARCHITECTURE

The website was mainly characterized by rich user data and featured extensive capabilities of social networking nature which entailed a PHP based design approach involving MySQL Server. The development structure was specifically implemented to facilitate the 'faster to market' transition of such concepts. PHP was used to develop modules like User Profiles, Invitations, Forums and Blogs other modules such that direct execution from the UI layer was possible. Effective access to the database in an object oriented context was implemented using an interface translating the object logic to relational logic so as to communicate with the relational databases in an object-oriented manner. Access to the data base was enabled through the creation of an intermediary abstraction layer. Only the complex retrieval of data from multiple tables was facilitated through stored procedures and everywhere else conditional syntax was implemented to ensure seamless performance of the website. Images, applications and data were called from their respective servers keeping the UI

layer free of any business logic and scalability was guaranteed by implementing sub-domains for various areas of the website.

DEVELOPMENT HIGHLIGHTS

Grater accuracy in handling user status, user statistics and other user-related validations ensure privacy and security of content. Comprehensive search & browse options are offered within optimized query features. The entire framework was kept highly scalable in order to provide adaptability & ease while incorporating new features. Web usability guidelines were strictly adhered to during the development and the interface was easily navigable through the judicious use of CSS and HTML controls. Search Engine Optimization activities were regularly resorted to with a view to ensuring high visibility for the site over the internet. The site was developed and fully functional within a span of 5 months.

CLIENT FEEDBACK

“Very rarely does one encounter a company that delivers a high quality output with excellent round the clock support. We are very pleased with the job done by GMI and we will highly recommend them to anyone who is looking for consistency and quality in offshore development.”