

# **Project 20**

## **Global Matrimonial Services – Online Matrimonial Management System**

### **About the Client**

Established in 2015, Global Matrimonial Services was developed after extensive research in to the state of India's relationship services. It was clear to us that there was a need in India for a quality matrimonial service that was available to all Indians, regardless of their wealth or background.

The Global Matrimonial Services team is located within India as well as abroad. With backgrounds in astrology, psychology and counselling, our team has the experience required to create lasting relationships.

Our award winning services are both the most advanced and best value for money in all of India, and is available to those living at home as well as NRIs living abroad. Our platform is designed to be simple and easy to use, so whether it's creating a profile, chatting with prospective life partners or asking for advice in our relationship columns, you will find everything a breeze.

Our mission is to provide people with a satisfying experience by offering a service that is safe and easy for everyone in all age groups to use to find their life-partner.

Our vision is to help make the experience of finding a life partner as enjoyable as living the journey with them.

We know your time is precious, that is why we have created a system where you can select who is eligible to contact you. This saves you from wasting time reviewing incompatible profiles.

Our unique match making system will ensure you meet only the most suitable candidates. This system is exclusive to Global Matrimonial Services and is not available on other matrimonial sites.

As Global Matrimonial Services is the most value for money service in Australia, we receive more new profiles than other sites. This increases your odds of finding your life partner.

# **Project Brief:**

## **Objectives**

The Proposed Project is named as “WEB BASED MATRIMONIAL SYSTEM” where boys and girls registered themselves for to search their companions. Due to computerized and it is available online, people can register as and when they require and they can register wherever they are, so it provides lot of flexibility for people to search their companions easily.

Today, the marriage alliance arranged by known people and that are conducted manually and the amount of time required is very huge. Only they can help to know only few alliances.

## **What is Matrimonial Web System?**

The main objective of Matrimonial Web System is to provide Grooms and Brides with excellent matchmaking experience by exploring the opportunities and resources to meet true potential partner. Keeping our objective in mind, we have created a world-renowned online matchmaking services that will touch the souls of millions of people all over the globe.

## **The purposes of the Matrimonial Web System are:**

- The main purpose of this system is to facilitate matchmaking business by applying the information in the field.
- It helps the user by providing profiles of perspective “Bride” or “Groom” and other information regarding them online.
- User can get information regarding their dream life partner at his/her home at his/her convenience.
- This system also provides a search utility which helps those users who have a certain criteria of qualities in mind to make online matrimonial easier.

- Since internet is a pivot for modern business, our project which is based on internet paves a path for modernization in trade.

Matrimonial Web System will allow a new user to register and after successfully registration user can get email confirmation, after completing registration users profile will be visible to other users.

## **OVERALL DESCRIPTION OF THE PROPOSED SYSTEM**

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Matrimonial website which will provide platform to a lot of Bride/Groom for finding perfect match. There are different sectors like Registration, Partner, Search, etc. So the Bride/Groom can get their interest for find their partner. Bride/Groom can directly search Partner according to their required criteria. The

Bride/Groom can use match By Email functionality so he/she can get directly E-mail alert for the match which fulfill their required criteria.

## **System Features**

In the life of the software development, problem analysis provides a base for design and development phase. The problem is analyzed so that sufficient matter is provided to design a new system. Large problems are sub-divided into smaller once to make them understandable and easy for finding solutions. Same in this project all the task are sub-divided and categorized.

## **System Modules:**

User Management Module

Profile Management Module

Search and Filter Module

Matchmaking Module

Recommendation Module

Communication and Messaging Module

Notification Module

Admin Management Module

Analytics and Reporting Module

Security and Privacy Module

Backup and Recovery Module

Moderation Module

Payment and Subscription Module

# Functional Requirements

Functional requirements are product features or functions that developers must implement to enable users to accomplish their tasks. So, it's important to make them clear for the stakeholders. Generally, functional requirements describe system behavior under specific conditions. The developers of this system must enhance the performance and efficiency of the system by adding 15 to 20 more functional requirements. Students need to do their own research to find how they can improve the system and which FRs need to be added. The group must need a prior approval from the stakeholders/project supervisor before finalizing these Functional Requirements. These enhanced FRs must be reflected separately in Final SRS Report after the approval.

## User Registration and Authentication

1. The system should allow users to register with name, email, password, and personal details via PHP forms.
2. The system should hash passwords using PHP's `password_hash()` before saving in MySQL.
3. The system should validate input using both JavaScript (client side) and PHP (server side).
4. The system should send verification emails using PHP Mailer.
5. The system should implement CAPTCHA verification (Google reCAPTCHA or simple AI text recognition) to detect and block bot sign-ups.

## Profile Creation and Management

6. The system should allow users to create detailed personal profiles including demographic, professional, and preference data.
7. The system should store profiles in normalised MySQL tables (users, profiles, preferences).
8. The system should allow image uploads, and an AI-based image validator (e.g. TensorFlow.js or a pre-trained PHP/Flask service) should detect whether the uploaded photo is a real human face before approval.

9. The system should use a lightweight face-detection algorithm to crop and standardise profile photos for consistent display.
10. The system should allow users to update or deactivate their profiles anytime.

### **Smart Matchmaking**

11. The system should generate partner suggestions using a rule-based compatibility algorithm combining filters such as age, location, religion, and education.
12. The system should use a simple AI scoring model (e.g. linear weighting or logistic regression implemented in PHP) to rank matches based on compatibility score.
13. The system should continuously refine suggestions using user feedback (likes, rejections, or accepted matches) stored in MySQL.
14. The system should display the compatibility percentage with a short natural-language explanation (e.g. 'You share 4 out of 5 preferences: age, city, and education').
15. The system should store and update match scores dynamically through background PHP scripts.

### **Search and Filtering**

16. The system should allow users to search for potential partners using filters such as gender, age, religion, location, and education.
17. The system should dynamically generate SQL queries in PHP using prepared statements based on the filters selected.
18. The system should display search results using paginated lists (LIMIT and OFFSET queries in MySQL).
19. The system should allow users to save (shortlist) interesting profiles by adding entries into a shortlists table with user\_id and profile\_id.
20. The system should allow sorting search results (e.g. by age, newest profiles, or location proximity).

## **Match Suggestions**

21. The system should generate basic compatibility scores using PHP by comparing key fields (e.g. age difference, education match, religion match).
22. The system should display the top 10 most compatible profiles based on similarity scores calculated via PHP functions.
23. The system should update match suggestions dynamically whenever the user updates preferences.

## **Interest Requests and Communication**

24. The system should allow users to send an interest request (stored in an interests table) to another member.
25. The recipient should be able to accept or reject the request, the status should update in the database accordingly.
26. Once both users accept, they can exchange private messages via a PHP-based messaging module that stores chat history in a messages table.
27. The system should display unread message counts using MySQL aggregation queries.
28. The system should use AJAX to update chat messages without reloading the page.

## **Admin Dashboard**

29. The system should allow an administrator to log in via a separate admin login page with different access rights.
30. The admin should be able to:
  - View, edit, or delete user profiles.
  - Verify user accounts manually.
  - Block or unblock users.
  - View all reported profiles and complaints.
27. The system should display admin statistics (e.g. total users, male/female ratio, active users) using MySQL COUNT() and GROUP BY queries.

28. The admin should be able to generate reports and export them as CSV or PDF using PHP libraries (e.g. TCPDF).
29. The system should allow admins to:
30. View and verify new user registrations.
31. Approve or reject suspicious photos or bios.
32. Suspend or blacklist users for policy violations.
33. View audit logs of all admin actions.
34. The system should provide auto-flagging of abnormal activities (mass messaging, repeated rejections, or spam).
35. The system should support bulk email/SMS broadcast for important platform updates.

### **Notifications**

36. The system should send email notifications for important actions such as:
  - Registration success
  - Password reset link
  - Interest request received
  - Match accepted
37. The system should store all notification records in a notifications table for tracking and display them on the dashboard.
38. The system should show realtime notification counts in the navigation bar using AJAX refresh every 10 seconds.

### **Subscription & Payment (PHP + MySQL Simulation)**

39. The system should allow users to choose premium plans stored in a plans table (plan\_id, name, duration\_days, price).
40. Upon payment confirmation (manual or simulated), the system should insert records into a subscriptions table linking users and plan details.
41. The system should check plan expiry dates using scheduled PHP cron jobs and automatically downgrade expired members.



## **Reporting & Analytics (PHP + MySQL)**

42. The system should generate admin reports using MySQL JOIN and aggregate queries to show:

- Number of new users per month
- Number of accepted matches
- Gender ratio and active users

43. The system should visualize reports in charts using PHP Chart.js integration.

44. The system should allow exporting analytics data in CSV/PDF using PHP libraries such as TCPDF or FPDF.

## **Logging and Audit**

45. The system should maintain an activity\_log table to record important user and admin actions (login, logout, profile edits, etc.).

46. The system should display logs to administrators in chronological order for monitoring purposes.

47. The system should retain logs for at least 90 days before automatic deletion.

## **Non-Functional Requirements (NFRs)**

### **Performance**

1. The system should load all pages within 3 seconds under normal network conditions.
2. The system should support at least 1000 concurrent users.
3. The database should respond to queries in less than 2 seconds for up to 100,000 records.

### **Reliability**

4. The system should maintain 99% uptime excluding scheduled maintenance.
5. The system should provide automatic backup of user data daily.

6. In case of system failure, the database should restore from the latest backup without data loss exceeding 24 hours.

### **Security**

7. The system should use HTTPS (SSL/TLS) for secure data transmission.
8. Passwords and sensitive information should be encrypted and never stored in plaintext.
9. The system should prevent SQL Injection, XSS, and CSRF attacks.
10. User sessions should automatically expire after inactivity.

### **Usability**

11. The interface should be intuitive and mobile-responsive.
12. Form validations should display clear error messages.
13. The design should use consistent layouts and colour themes.
14. The system should support both desktop and mobile browsers.

### **Maintainability**

15. The system should follow modular PHP code structure with MVC pattern.
16. All functions should be documented for future maintenance.
17. The database schema should be normalised up to 3NF for scalability.

### **Scalability**

18. The system should support easy migration from single-server MySQL to clustered database architecture.
19. The design should allow integration with REST APIs for mobile app extension.

### **Availability**

20. The system should be available 24 × 7 with scheduled downtime notifications.
21. The system should automatically recover from unexpected server shutdowns using error logs.

**Data Integrity**

- 22.The system should ensure consistency between linked tables (foreign-key constraints).
- 23.The system should validate all input before committing to the database.

**Compliance**

- 24.The system should comply with GDPR-like data privacy standards, allowing users to delete their profiles permanently.
- 25.All personal information should be used only for matchmaking purposes.

**Hardware Requirement: Should be recommended by the developers.**

**Software Requirement: Should be recommended by the developers.**