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**Project Name:** Match Mingle (Online Matrimony Website)

**1. Introduction:**

Match Mingle Online Matrimony aims to revolutionize the matchmaking experience by providing a seamless, secure, and efficient platform for brides and grooms to find their ideal life partners. The platform will offer advanced matchmaking algorithms, user-friendly navigation, and privacy-focused communication tools to ensure a smooth and personalized experience for every user.

The purpose of this feasibility report is to assess the viability of developing Match Mingle Online Matrimony as a scalable and feature-rich matchmaking platform. This report evaluates the technical, economic, operational, legal, and scheduling aspects of the project to determine its feasibility.

Our goal is to create a reliable and inclusive matchmaking solution that caters to diverse preferences while ensuring data security, user privacy, and a high success rate in partner connections. The platform will include essential features such as profile creation, compatibility-based matching, secure messaging, subscription plans, and an admin dashboard for efficient user management. With a strong focus on user satisfaction, security, and operational efficiency, the project aims to establish a leading online matrimony service within the given budget and timeline.

**2. Background:**

In today's digital era, where people increasingly turn to online platforms for essential services, the demand for efficient and reliable matrimonial websites has grown significantly. Finding a life partner is a deeply personal journey, and traditional matchmaking methods are being replaced by technology-driven solutions that offer convenience, security, and personalized recommendations.

Match Mingle Online Matrimony is designed to address this shift by providing a modern, user-friendly, and inclusive matchmaking platform. I recognize that individuals seek a trustworthy and efficient way to find compatible partners, and my goal is to make the process easier and more meaningful. My platform will feature advanced matchmaking algorithms, detailed profile customization, secure messaging, and premium subscription services to enhance user experience.

Beyond just facilitating connections, my platform prioritizes privacy, security, and cultural inclusivity, ensuring that users feel safe and comfortable while searching for their ideal match. The market research indicates that the demand for digital matchmaking services is rising, making this the perfect time to invest in a high-quality, technology-driven solution.

I am leveraging the latest web and mobile technologies to build a seamless, scalable, and engaging platform. Additionally, I have carefully planned the project to ensure it remains financially viable and sustainable within the given budget. With smart marketing strategies and continuous feature enhancements, I am confident that Match Mingle Online Matrimony will become a trusted and leading platform in the online matchmaking industry.

In summary, this project is about more than just creating a matrimony website—it’s about transforming the way people find life partners, making matchmaking more accessible, secure, and effective in today’s digital world.

**3. Outline of project**

Table 3.1:Outline of Project

| Serial No | Item | Description |
| --- | --- | --- |
| 1 | Users | 1. Bride 2. Groom 3. Parents/Guardians 4. Administrators 5. Premium Members |
| 2 | Problems | 1. Limited user engagement and interaction 2. Security concerns and data privacy issues 3. Technical glitches and performance issues 4. Poor matchmaking algorithm efficiency 5. Lack of effective marketing strategies 6. Insufficient customer support 7. Legal and compliance challenges 8. Intense competition in the online matrimony industry 9. Lack of innovation and adaptability 10. Financial constraints |
| 3 | Reasons of Problems | 1. Lack of user-centric design and intuitive UI 2. Inadequate security measures for user data protection 3. Limited technological resources and system bugs 4. Poorly optimized matchmaking algorithms 5. Ineffective branding and marketing strategies 6. Challenges in user retention and engagement 7. Failure to comply with legal and data protection laws 8. Market saturation and changing user preferences 9. Budget and resource constraints 10. Lack of continuous improvements and updates |
| 4 | Performed Tasks | 1. User registration and profile creation 2. Matchmaking algorithm implementation 3. Secure messaging and communication features 4. Subscription and payment system integration 5. User data management and verification process 6. Customer support and feedback system 7. Security enhancements and fraud prevention 8. Content moderation and privacy controls 9. Analytics and reporting for better insights 10. Performance optimization and system updates |
| 5 | Required Data | **User Data:**  **User profiles:**   1. Name 2. Age 3. Gender 4. Location 5. Religion 6. Caste 7. Mother Tongue 8. Education 9. Occupation 10. Location (city, country) 11. Marital status 12. Profile picture 13. Contact information (email, phone) 14. Preferences (e.g., desired partner characteristics)   **User authentication credentials**:  1.Username  2.Password (encrypted and securely stored)  3.Security questions/answers  **User preferences**:   1. Preferred age range for partner. 2. Religious or cultural preferences. 3. Partner's education, occupation, and other preferences.   **Matchmaking algorithm data**:   1. Partner compatibility scores based on profiles and preferences. 2. Matches based on user input (e.g., location, age, interests).   **Profile Information (for potential matches):**  **Basic Details:**   1. Name 2. Age, Date of Birth 3. Height 4. Weight 5. Religion/Caste 6. Location 7. Family Details:   1. Father’s occupation  2. Mother’s occupation  3. Sibling details  4. Family background (e.g., affluent, middle class)  **Educational and Professional Information:**   1. Highest qualification 2. University/Institution 3. Occupation/Job details 4. Annual income 5. Employer details   **Lifestyle:**   1. Smoking habits 2. Drinking habits 3. Hobbies/Interests 4. Languages spoken   **Partner Preferences:**  1. Age range  2. Religion/Caste  3. Height/Weight preferences  4. Location preferences  5.Lifestyle preferences (e.g., smoking, drinking) **Matchmaking Data:** **Match suggestions:**   1. Compatibility scores based on user input 2. Last active profiles 3. Most viewed profiles 4. Similar profiles (based on preferences)   **Chat/Interaction history:**   1. 1. Messages exchanged between potential matches 2. 2. Blocked users or reported profiles 3. 3. Last login and interaction timestamps  **Transaction Data:** **Subscription plans:**   1. Plan details (e.g., free, premium) 2. Duration of the plan 3. Payment status (pending, completed) 4. Transaction IDs and timestamps 5. Subscription upgrade/downgrade history   **Payment information (encrypted):**   1. 1. Payment method (credit card, Bkash, etc.) 2. 2. Billing details 3. 3. Payment receipt confirmation 4. 4. Invoice history  **Customer Support Data:** **Support inquiries:**   1. User tickets (issue raised by the user) 2. Correspondence history (chat logs, emails) 3. Feedback or complaints  **Security Data:** **Authentication logs:**  1. Login attempts (successful/failed) 2. User IP address 3. Access times 4. Failed login attempts     **Access control:**   1. Admin user roles 2. User privileges 3. Profile privacy settings   **Security incident logs:**   1. Suspicious activity (failed logins, fraud attempts) 2. Account lockouts  **Content Data:** **User-generated content:**   1. Profile descriptions 2. Photos uploaded by users (with moderation) 3. Status updates (if applicable)   **Blog posts and articles:**   1. Matrimonial tips 2. Wedding planning advice 3. Success stories   **Reviews and testimonials:**   1. User feedback 2. Success stories shared by couples   **Legal and Compliance Data:**  1. Terms of service: Legal agreements users must accept when joining 2. Privacy policy: Data usage, storage, and sharing practices  **Marketing Data:** **Campaign performance:**   1. Email marketing statistics (open rates, click rates) 2. Social media engagement (likes, shares, comments) 3. Promotions (discounts for subscription plans, ads)   **Customer segmentation data:**   1. Demographics (age, location, religion, caste, etc.) 2. Active users and their preferences   **Advertising analytics:**   1. Click-through rates for advertisements 2. Impressions (ad views) 3. Conversion rates (from ad to subscription)  **Website Analytics Data:** **Website traffic:**   1. Page views, unique visitors 2. Bounce rates 3. Click patterns (which pages are visited the most) 4. Time spent on pages   **User interactions:**   1. Profile views 2. Matches clicked or contacted 3. Photos viewed   **Conversion rates:**   1. Number of users who subscribe after visiting 2. Number of users who upgrade from free to paid plans   **User demographics:**   1. Age, gender, location, and preferences  **Recommendation and Personalization Data:** **Browsing history:**   1. Pages visited (e.g., profiles viewed, articles read) 2. Search history   **Personalized recommendations:**   1. Matches based on profile data and activity 2. Articles or content suggestions 3. Suggested subscription plans based on activity |

**4. DFD:**

The logical model of the system is shown using DFD (Data Flow Diagram) in figure

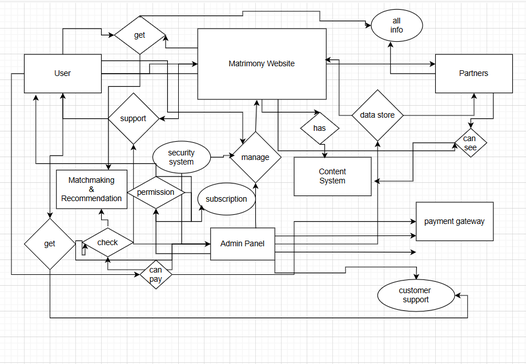


Fig 4.1: Data Flow Diagram(DFD)

**5. Methodology**

Developing the Match Mingle Matrimony platform involves solving key problems at each stage, and ensuring that the solution is both practical and effective.To make sure the platform works smoothly, we go through a detailed process, including Technical, Operational, and Economic Feasibility Studies.Here's how we approach it,

5.1. **Problem**: How do we gather the right requirements and ensure the platform aligns with user needs?

**Solution**: Requirements Gathering.

First, we define clear project goals, objectives, and the overall scope. We also conduct market research to understand what users really want and analyze trends in the industry. By engaging with stakeholders through interviews and surveys, we gather both functional and non-functional requirements.We pay special attention to user preferences and the kind of partner characteristics users expect for matchmaking.

5.2. **Problem**: How do we plan and analyze the project to ensure everything is organized and feasible?

**Solution**: Planning and Analysis.

Next, we break down the project into manageable pieces. This includes defining the architecture—frontend, backend, and database systems—and creating wireframes or mockups to visualize the user interface. We also define a clear timeline with milestones and resource allocation, ensuring the project stays on track. Along the way, we conduct risk analysis to anticipate challenges and create strategies to mitigate potential issues.

5.3. **Problem**: How do we design an easy-to-use, scalable, and secure platform?

**Solution**: Design.

When it comes to design, our main focus is user experience. We ensure that the user interface (UI) is intuitive, accessible, and responsive across all devices. We also develop a robust database schema to handle everything from user profiles to matchmaking data. At the same time, we define the platform’s technical architecture, selecting the technologies and frameworks that will best support the platform’s growth and performance.

5.4. **Problem**: How do we efficiently implement the platform and ensure security, scalability, and a smooth user experience?

**Solution**: Development.

We build the frontend using technologies like HTML, CSS, and JavaScript to create visually appealing, interactive pages. For the backend, we use powerful programming languages like Java, Python, or Node.js, integrating them with secure third-party services for payment, messaging, and notifications. Security is a top priority, so we use encryption, secure authentication, and data validation to protect users’ sensitive information.

5.5. **Problem**: How do we ensure the platform functions perfectly and remains bug-free before launch?

**Solution**: Testing.

Once the platform is developed,we thoroughly test everything. This starts with unit testing to ensure individual components are working correctly, followed by integration testing to make sure the frontend and backend interact as expected.We also conduct system-wide testing to evaluate overall performance and usability. Finally, we run User Acceptance Testing (UAT) to gather feedback from real users, making any necessary adjustments before the official launch.

5.6. **Problem**: How do we deploy the platform securely and ensure it can scale reliably?

**Solution**: Deployment.

After testing, we deploy the platform to a cloud environment that’s both secure and scalable. We set up domain settings, SSL certificates, and other security measures to ensure a smooth, secure deployment.We closely monitor the platform’s performance, uptime, and user feedback during the initial launch to quickly address any issues that arise.

5.7. **Problem**: How do we maintain and improve the platform once it’s live?

**Solution**: Maintenance and Support

Post-launch,it’s important to keep the platform running smoothly. This includes fixing any bugs, optimizing performance, and releasing regular updates to keep everything fresh. We also monitor user feedback to understand what’s working and where improvements can be made. With new features and updates, we make sure the platform stays relevant and competitive.

5.8. **Problem**: How do we keep improving the platform over time to meet evolving user needs?

**Solution**: Continuous Improvement.

The work doesn’t stop after launch. We keep gathering user feedback and analyzing data to identify areas for improvement. We stay on top of emerging technologies and trends to keep the platform innovative. We also monitor industry standards, security trends, and regulations to ensure the platform stays compliant and secure.

Before jumping into development, we conduct Technical, Operational, and Economic Feasibility Studies to ensure the platform will succeed in the long run.

**Technical Feasibility Study:**

**Problem**: Do we have the right technology to build and run this platform?

**Solution:**

1.Technology Assessment: We carefully consider whether we have the right tools and technologies, like React.js for the frontend, Java for the backend, Firebase for data storage, and blockchain for secure transactions.

2.Existing Systems Review: By looking at existing matrimony platforms, we can learn from industry best practices and define the technical requirements for our platform.

3.Resources Assessment:We assess the resources available, such as skilled developers, designers, and cybersecurity experts, to ensure that we can deliver the platform efficiently.

**Operational Feasibility Study**

**Problem**: Can our platform be operated smoothly on a day-to-day basis?

**Solution**:

1.User Operations: We focus on ensuring that the platform can connect users effectively, manage their profiles, and provide them with an enjoyable matchmaking experience.

2.System Management: We evaluate the platform's ability to handle databases, user accounts, and matchmaking processes efficiently.

3.Customer Support: We ensure the platform can provide the support users need, whether that’s through chat, email, or phone.

4.User Engagement: We consider how the platform can keep users engaged, such as through personalized match suggestions and recommendations.

**Economic Feasibility Study**

**Problem**: Will the platform generate enough revenue to be financially sustainable?

**Solution**:

1.Financial Projection: We run financial projections based on market trends and revenue models, using formulas like P = F / (1 + I)^n to forecast future benefits and return on investment.

2.Business Model Evaluation: We consider different ways to generate revenue, such as subscription plans, freemium features, or ad-based models.

3.Cost Analysis: We also factor in the development and maintenance costs to ensure the platform remains economically viable.

4.Market Research: By looking at user willingness to pay and market trends, we can forecast how much revenue the platform will generate.

By addressing each of these problems with practical solutions and thorough feasibility studies, we ensure that Match Mingle is not only technically possible but also viable from an operational and financial perspective. This structured approach guarantees the platform’s success and sustainability.

**6.Overview of Alternatives**

Offline Matchmaking Services:

An offline approach involves physical registration centers where users manually submit their details. Matchmaking consultants assist in finding suitable matches based on preferences. Offline matchmaking requires in-person interactions, paper-based documentation, and scheduled meetings. While this method offers personalized guidance, it is time-consuming, requires more staff, and incurs higher operational costs.

By analyzing both alternatives, the online platform emerges as the more efficient, scalable, and cost-effective solution, whereas offline matchmaking offers a more personalized but resource-intensive approach.

| Item | Offline Matchmaking (Alternative 01) |
| --- | --- |
| Revenue Model | One-time service fee, event-based revenue |
| User Access | In-person consultation, manual matchmaking |
| Required Extra Resources | Office space, matchmaking consultants, printed profiles |
| Advantages | Personalized service, direct interaction |
| Disadvantages | Limited reach, expensive to maintain |

6.1 Economic Feasibility Study for the Alternatives

| **Serial No** | **Item** | **Amount (BDT)** |
| --- | --- | --- |
| **1** | Matchmaking Consultant Fees | 3,00,000 |
| **2** | Office Space and Utilities | 1,00,000 |
| **3** | Profile Documentation (Printing & Verification) | 50,000 |
| **4** | Event Management (Venues, Catering, etc.) | 1,00,000 |
| **5** | Marketing and Promotion (Offline) | 50,000 |
| **6** | Transportation and Logistics | 30,000 |
| **7** | Support and Maintenance Setup | 20,000 |
|  | Total Cost | 6,50,000 |

Table 6.2: Summary of Cost for Offline Match Mingle

**Financial Analysis of Alternative 01 (Offline Model):**

The initial investment required for the Offline Model (Alternative 1) is BDT 6,50,000, which is a one-time cost. The benefits and costs on a yearly basis are outlined in the following table:

| **Benefits** | **Amount (BDT)** | **Costs** | **Amount (BDT)** |
| --- | --- | --- | --- |
| 1. Increased user engagement through events and face-to-face interactions | 3,00,000 | Office Space and Utilities | 1,00,000 |
| 2. Client referrals and brand promotion via offline marketing | 2,00,000 | Event Management (Venues, Catering) | 1,00,000 |
| 3. Custom-made matchmaking solutions | 1,00,000 | Marketing and Promotion (Offline) | 50,000 |
| 4. Personal consultations for premium clients | 1,50,000 | Transportation and Logistics | 30,000 |

Table 6.5: Benefits and Costs for Alternative 1

**Net Return per Year**

Total Benefits:  
 3,00,000 (User Engagement) + 2,00,000 (Referrals & Promotions) + 1,00,000 (Custom Solutions) + 1,50,000 (Consultations) = 7,50,000 BDT

Total Costs:  
 1,00,000 (Office Space) + 1,00,000 (Event Management) + 50,000 (Marketing) + 30,000 (Logistics) = 2,80,000 BDT

**Net Return per Year** = 7,50,000 – 2,80,000 = 4,70,000 BDT

**Investment Analysis for Alternative 1:**

| **Serial No.** | **Particulars** | **Amount (BDT)** |
| --- | --- | --- |
| 1 | Initial Investment | 6,50,000 |
| 2 | Net Return per Year | 4,70,000 |
| 3 | Payback Period (Years) | 1.38 years |

Table 6.6: Investment Analysis for Alternative 1

The payback period for Alternative 1 (Offline Model) is calculated as follows:  
 **Payback Period** = Initial Investment / Net Return per Year  
 = 6,50,000 / 4,70,000 ≈ 1.38 years.

Based on this analysis, the payback period for Alternative 1 is approximately 1.38 years, indicating that the investment is expected to be recovered in just over 1 year.

| Year | Saving (BDT) | Present Value (at 12%) | Cumulative Value |
| --- | --- | --- | --- |
| 1 | 4,70,000 | 0.8929 | 4,19,730 |
| 2 | 4,70,000 | 0.7971 | 8,13,214 |
| 3 | 4,70,000 | 0.7118 | 11,83,970 |
| 4 | 4,70,000 | 0.6355 | 15,37,472 |
| 5 | 4,70,000 | 0.5673 | 18,84,823 |
| 6 | 4,70,000 | 0.5070 | 22,32,612 |
| 7 | 4,70,000 | 0.4527 | 25,64,717 |
| 8 | 4,70,000 | 0.4046 | 28,91,111 |
| 9 | 4,70,000 | 0.3611 | 32,12,887 |
| 10 | 4,70,000 | 0.3229 | 35,30,937 |

Table 6.7: Investment Analysis for Alternative 1 (Offline)

**Saving (BDT)**: The net return from the project for each year.  
**Present Value (at 12%)**: The value of the savings in today's terms, discounted at 12% annual interest.  
**Cumulative Value**: The total present value accumulated over the years.

This analysis helps estimate how the future savings (net returns) will contribute to the overall profitability of the project, considering a 12% annual discount rate.

### **Technical Feasibility Study**

All alternatives for Match Mingle (Offline Matrimony Service) rely on manual operations, physical infrastructure, and basic record-keeping, making them technically feasible.

### **Operational Feasibility Study**

Each alternative ensures a structured matchmaking process, but manual data handling, record maintenance, and in-person meetings make it less efficient compared to an online platform.

### **Recommendation**

After analyzing the economic, operational, and technical feasibility of the offline alternatives, we assess their cost, efficiency, and scalability. The comparison for Alternative 1 is outlined below:

| Serial No | Feature | Alternative 01 (Offline) |
| --- | --- | --- |
| 1 | Investment | 9,50,000 BDT |
| 2 | System Life Cycle | 6 Years |
| 3 | Return Value | 8,20,000 BDT |
| 4 | Payback Period | 8 Years |

Table 7.1: Evaluation of Alternative 1 (Offline)

From Table 7.1, we can see that Alternative 1 requires high investment but has a long payback period of 8 years, making it financially less viable. The offline model depends on physical infrastructure and manual matchmaking, leading to higher operational costs and slower processing.

In comparison, the online model is more cost-effective, scalable, and efficient. Therefore, investing in an online matrimony platform is the better choice, ensuring improved user experience, automated matchmaking, and long-term financial sustainability.

**8. Overview of Alternatives(User Basis)**

The development of Match Mingle, a matrimonial platform, presents various challenges that can be addressed through multiple approaches. After studying the existing models of matrimonial websites and understanding the unique requirements of our platform, we propose several alternatives to enhance its functionality, scalability, and user experience. These alternatives aim to provide the best possible solution while considering factors such as cost, performance, and user engagement. The proposed alternatives include :(i) a subscription-based model with freemium features, (ii) an ad-based revenue model combined with a freemium structure, and (iii) a hybrid model offering both subscription and ad-based revenue streams. A brief description of these alternative models is presented below,

| **Item** | **Alternative 01** | **Alternative 02** | **Alternative 03** |
| --- | --- | --- | --- |
| **Revenue Model** | Subscription-based with Premium | Ad-based revenue with Premium | Hybrid model (Subscription + Ad-based) |
| **User Access** | Free access with limited features, premium upgrade available | Free access with ads, premium ad-free version available | Free access with ads and premium subscription |
| **Required Extra Resources** | Payment gateway, subscription management system | Ad server, analytics tools | Payment gateway, ad server, analytics tools |
| **Advantages** | Reliable and steady revenue, better user control | Easy to implement, fast monetization | Balanced approach with multiple revenue streams |
| **Disadvantages** | High upfront development cost | Ad revenue depends on traffic volume, may irritate users | Complex to manage, requires balancing both models effectively |

Table 8: Descriptions of Alternatives for Match Mingle

**8.1 Economic Feasibility Study for the Alternatives:**

The initial investment required for each alternative of Match Mingle has been outlined in the following tables. These costs include the application development, necessary hardware, and other relevant resources.

| Serial No | Item | Amount (BDT) |
| --- | --- | --- |
| 1 | Application Software Development | 6,00,000 |
| 2 | Payment Gateway Integration | 50,000 |
| 3 | Web Hosting and Server Costs | 1,00,000 |
| 4 | Database Server | 80,000 |
| 5 | User Authentication System | 30,000 |
| 6 | Initial Marketing Campaign | 40,000 |
| 7 | Support and Maintenance Setup | 20,000 |
|  | Total | 8,20,000 |

Table 8.1: Summary of cost for Alternative 1

| Serial No | Item | Amount (BDT) |
| --- | --- | --- |
| 1 | Application Software Development | 5,50,000 |
| 2 | Ad Server Setup | 70,000 |
| 3 | Web Hosting and Server Costs | 1,00,000 |
| 4 | Database Server | 75,000 |
| 5 | Analytics Tools | 50,000 |
| 6 | Initial Marketing Campaign | 30,000 |
| 7 | Support and Maintenance Setup | 20,000 |
|  | Total | 7,75,000 |

Table 8.2: Summary of Cost for Alternative 2

| Serial No | Item | Amount (BDT) |
| --- | --- | --- |
| 1 | Application Software Development | 6,20,000 |
| 2 | Payment Gateway Integration | 50,000 |
| 3 | Ad Server Setup | 70,000 |
| 4 | Web Hosting and Server Costs | 1,00,000 |
| 5 | Database Server | 90,000 |
| 6 | Analytics Tools | 60,000 |
| 7 | Initial Marketing Campaign | 40,000 |
| 8 | Support and Maintenance Setup | 30,000 |
|  | Total | 9,70,000 |

Table 8.3: Summary of Cost for Alternative 3

These cost estimates include the development of the platform, required hardware, initial marketing, and support setup. Based on the chosen alternative, the economic feasibility of Match Mingle will be evaluated in terms of return on investment, ongoing operational costs, and the potential for scaling the platform.

**Financial Analysis of Alternative 01 (Subscription-based with Premium Model):**

The initial investment required for Alternative 1 is BDT 8,20,000, which is a one-time cost. The benefits and costs on a yearly basis are outlined in the following table.

| Benefits | Amount (BDT) | Costs | Amount (BDT) |
| --- | --- | --- | --- |
| 1. Better Service (Customer satisfaction, platform usability, etc.) | 4,0  0,000 | Maintenance and Stationary | 2,00,000 |
| 2. User Subscription Fees (Annual revenue from subscribers) | 2,50,000 | Web Hosting and Server Maintenance | 1,50,000 |
| 3. Premium Features Upgrades (Increased usage of paid features) | 1,50,000 | Database Management | 1,00,000 |
| Net Return per Year | 8,00,000 |  | 4,50,000 |

Table 8.4: Benefits and Costs for Alternative 1

Based on the above table, the net return for Alternative 1 can be calculated as follows:

**Total Benefits:** 4,00,000 (Better Service) + 2,50,000 (Subscription Fees) + 1,50,000 (Premium Features Upgrades) = 8,00,000 BDT

**Total Costs:** 2,00,000 (Maintenance and Stationary) + 1,50,000 (Web Hosting and Server Maintenance) + 1,00,000 (Database Management) = 4,50,000 BDT

**Net Return per Year** = 8,00,000 – 4,50,000 = 3,50,000 BDT

**Investment Analysis for Alternative 1:**

| **Serial No.** | **Particulars** | **Amount (BDT)** |
| --- | --- | --- |
| 1 | Initial Investment | 8,20,000 |
| 2 | Net Return per Year | 3,50,000 |
| 3 | Payback Period (Years) | 2.34 years |

Table 8.5: Investment Analysis for Alternative 1

The payback period for Alternative 1 is calculated as follows:

**Payback Period** = Initial Investment / Net Return per Year  
 = 8,20,000 / 3,50,000 ≈ 2.34 years

Based on this analysis, the payback period for Alternative 1 is approximately 2.34 years, indicating that the investment is expected to be recovered in just over 2 years.

| **Year** | **Saving (BDT)** | **Present Value (at 12%)** | **Cumulative Value** |
| --- | --- | --- | --- |
| 1 | 3,50,000 | 0.8929 | 3,12,650 |
| 2 | 3,50,000 | 0.7971 | 6,19,128 |
| 3 | 3,50,000 | 0.7118 | 9,10,565 |
| 4 | 3,50,000 | 0.6355 | 11,76,186 |
| 5 | 3,50,000 | 0.5673 | 14,43,420 |
| 6 | 3,50,000 | 0.5070 | 17,22,640 |
| 7 | 3,50,000 | 0.4527 | 20,03,883 |
| 8 | 3,50,000 | 0.4046 | 22,67,643 |
| 9 | 3,50,000 | 0.3611 | 25,28,763 |
| 10 | 3,50,000 | 0.3229 | 27,90,545 |

Table 8.6: Investment Analysis for Alternative 1

**Saving (BDT):** The net return from the project for each year.

**Present Value (at 12%):** The value of the savings in today's terms, discounted at 12% annual interest.

**Cumulative Value:** The total present value accumulated over the years.

This analysis helps estimate how the future savings (net returns) will contribute to the overall profitability of the project, considering a 12% annual discount rate.

### **Financial Analysis of Alternative 02**

The investment for **Alternative 2** is **BDT 5,50,000**, which is a one-time initial cost. The yearly benefits and costs are detailed in **Table 6.8**.

#### 

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| **Benefits** | **Amount (BDT)**   |  | | --- | | **Costs**   |  | | --- |  |  | | --- | | **Amount(BDT)**   |  | | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Better Service | 2,80,000   |  | | --- |  |  | | --- | | Maintenance & Stationary | 1,50,000   |  | | --- |  |  | | --- | |
| | Data Entry | | --- |  |  | | --- | | | 5,000 | | --- |  |  | | --- | |  |  |
| | Net Return per Year | | --- |  |  | | --- | | | (280000 - 150000 - 5000) = 1,25,000 | | --- |  |  | | --- | |  |  |

#### Table 8.7: Benefits and Cost for Alternative 2

On the basis of **Table 6.8**, investment analysis for **Alternative 2** is shown in **Table 6.9**.

| Year | Saving (BDT) | Present Value (at 12%) | Cumulative Value |
| --- | --- | --- | --- |
| 1 | 1,25,000 | 1.07 | 1,07,000 |
| 2 | 1,25,000 | 0.96 | 2,03,000 |
| 3 | 1,25,000 | 0.85 | 2,88,250 |
| 4 | 1,25,000 | 0.76 | 3,64,700 |
| 5 | 1,25,000 | 0.68 | 4,32,150 |
| 6 | 1,25,000 | 0.60 | 4,92,650 |
| 7 | 1,25,000 | 0.54 | 5,46,150 |
| 8 | 1,25,000 | 0.48 | 5,94,150 |
| 9 | 1,25,000 | 0.43 | 6,37,150 |
| 10 | 1,25,000 | 0.38 | 6,75,650 |

#### Table 8.8: Investment Analysis for Alternative 2

### **Financial Analysis of Alternative 03**

The investment for Alternative 3 is BDT 3,80,000, which is a one-time initial cost. The yearly benefits and costs are detailed in **Table 6.10**.

| Benefits | Amount (BDT) | Costs | Amount (BDT) |
| --- | --- | --- | --- |
| Better Service | 2,00,000 | Maintenance & Stationary | 1,20,000 |
| Data Entry | 10,000 |  |  |
| Net Return per Year | (200000 - 120000 - 10000) = 70,000 |  |  |

#### Table 8.9: Benefits and Cost for Alternative 3

On the basis of **Table 6.10**, investment analysis for **Alternative 3** is shown in **Table 6.11**.

| Year | Saving (BDT) | Present Value (at 12%) | Cumulative Value |
| --- | --- | --- | --- |
| 1 | 70,000 | 1.07 | 74,900 |
| 2 | 70,000 | 0.96 | 1,42,100 |
| 3 | 70,000 | 0.85 | 1,95,350 |
| 4 | 70,000 | 0.76 | 2,38,950 |
| 5 | 70,000 | 0.68 | 2,73,750 |
| 6 | 70,000 | 0.60 | 3,01,950 |
| 7 | 70,000 | 0.54 | 3,24,750 |
| 8 | 70,000 | 0.48 | 3,43,350 |
| 9 | 70,000 | 0.43 | 3,58,450 |
| 10 | 70,000 | 0.38 | 3,71,950 |

#### Table 8.10: Investment Analysis for Alternative 3

### **Technical Feasibility Study**

### All alternatives for Match Mingle require basic computing resources, supported technologies, and available technical expertise, making them technically feasible.

### **Operational Feasibility Study**

Each alternative ensures a user-friendly experience, secure data handling, and smooth matchmaking, making them operationally feasible.

**7.**  **Recommendation**

After analyzing the alternatives in different aspects, including **economic, operational, and technical feasibility**, while considering budget and time constraints, we recommend the best option based on various key factors.

**MatchMingle (Online Matrimony Site)** user basis is illustrated in Table 9

| Serial No | Feature | Alternative 01 | Alternative 02 | Alternative 03 |
| --- | --- | --- | --- | --- |
| 1 | Investment | 8,20,000 BDT | 5,50,000 BDT | 3,80,000 BDT |
| 2 | System Life Cycle | 6 Years | 6 Years | 6 Years |
| 3 | Return Value | 7,40,000 BDT | 4,25,000 BDT | 5,40,000 BDT |
| 4 | Payback Period | 9 Years | 7 Years | 4 Years |

#### Table 9: Comparison between Alternatives

From Table 9 , we can conclude that Alternative 3 is the most cost-effective option among all alternatives. It requires the least investment while still providing a significant return value. Additionally, it has the shortest payback period of 4 years, making it the most financially viable choice. Therefore, Alternative 3 is the preferred option for implementing Match Mingle, ensuring an efficient and sustainable matchmaking platform.

**8. Conclusion**

In this study, we have proposed two system for implementing Match Mingle -

**Online Model:** A technology-driven platform with automated matchmaking, secure data handling, and a scalable user experience.

**Offline Model:** A traditional matchmaking service relying on manual processes, in-person interactions, and physical infrastructure.

Both alternatives are technically and operationally feasible. However, based on economic analysis, the online model proves to be more cost-effective in the long run. It offers higher scalability, lower operational costs, and a faster return on investment compared to the offline model, which requires significant manual effort and higher maintenance expenses.

Therefore, the Match Mingle online model is the most efficient and sustainable option for implementing Match Mingle.