LSDB
Technical Requirements Document

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1.Overview

System Development:

- **Project Sponsor**: The project sponsor is the individual or entity providing the necessary resources and support for the website development. This could be the person who initiated the idea or someone funding the project.

- **User**: Users are the individuals who will interact with the website. In this context, users include visitors exploring the site, potential clients seeking information, and individuals booking appointments with Graham.

- **Developer**: The developer is the entity responsible for designing, coding, and implementing the website. This could be an internal development team, an external web development agency, or a freelance developer.

- **Support Groups**: Support groups are those responsible for maintaining and troubleshooting the website after its launch. This may include IT support, customer service, and any individuals or teams handling technical issues.

Operations:

- **Operating Sites**: The current and planned operating sites refer to the locations where the website will be accessible. This could include the main website domain as well as any subdomains or related platforms.

Maintenance:

- **Maintenance Groups:** Maintenance groups involve the teams or individuals responsible for ongoing updates, bug fixes, and improvements to the website. This may include developers for technical updates and content creators for regular content updates.

- **Maintenance Schedule**: Establish a regular maintenance schedule to ensure the website's content and features remain up-to-date, relevant, and secure.

High-Level Overview and Technical Summary:

- Overview: The website aims to create a warm, engaging, and professional online presence for Graham. It includes various pages such as Home, Social Media Integration, Journey Map, Professional and Personal Story, Services, Testimonials, Teaser Videos, Blog Posts, and a Connect Page.

- **Technical Summary**

- The technical implementation involves web development technologies and frameworks. Social media integration requires API connections. The Journey Map may involve interactive mapping technologies. The Connect Page needs integration with an appointment booking system. Regular updates and maintenance will be essential for content freshness, security, and optimal performance.

By identifying key stakeholders, operating sites, and providing a high-level technical overview, you can lay the foundation for successful system development, operations, and maintenance for the website project.

1.1 Purpose

The purpose of the information provided is to offer a comprehensive understanding of the website development project, outlining key aspects related to system development, operations, and maintenance. This information serves as a guide for stakeholders involved in the project, ensuring clarity about roles, responsibilities, and the overall vision.

1. Project Sponsor, User, Developer, and Support Groups:

1. Purpose: Clearly define the key players in the project, establishing accountability and responsibility. This information ensures that each group understands their role in the development, operation, and maintenance phases.
2. Benefits: Facilitates effective communication, reduces misunderstandings, and ensures that expectations are aligned among all involved parties.

2. Current and Planned Operating Sites:

1. Purpose: Identify where the website will be accessible and the potential expansion plans. This information helps in strategizing the deployment and scalability of the website.
2. Benefits: Enables efficient resource allocation, hosting decisions, and geographical targeting for marketing efforts.

3. High-Level Overview and Technical Summary:

1. Purpose: Provide a bird's-eye view of the website's structure, content, and technical aspects. This information helps stakeholders grasp the overall vision and functionality of the website.
2. Benefits: Guides decision-making during development, aids in resource allocation, and aligns the team with the project's goals.

1.2 Scope

The scope outlines the boundaries and limitations of the website development project. It defines what will be included and what will not be addressed in the project.

1. System Development:

    a. Scope: Involves the entire process of designing, coding, and implementing the website, from conception to launch.

    b. Limitations: Does not cover ongoing maintenance or day-to-day operations.

2. Operations:

    a. Scope: Encompasses the locations (current and planned) where the website will be accessible.

    b. Limitations: Does not delve into the technical details of the website but focuses on its geographical reach.

3. Maintenance:

    a. Scope: Involves the ongoing updates, bug fixes, and improvements to ensure the website remains relevant and functional.

    b. Limitations: Does not include initial development but concentrates on the post-launch phase.

By clearly defining the purpose and scope, this information serves as a foundational document for effective project management, communication, and decision-making throughout the lifecycle of the website.

2.Requirement Assumptions

1. Stable Internet Connection:

    a. Assumption: Users accessing the website have a stable internet connection.

    b. Implication: The website's design can include rich media elements without significant concerns about loading times.

2. User Device Compatibility:

    a. Assumption: Users primarily access the website through devices with standard web browsers.

    b. Implication: The website's design should prioritize responsiveness to ensure an optimal user experience across various devices.

3. Social Media Availability:

    a. Assumption: Users have access to and engage with social media platforms.

    b. Implication: Integrating social media elements into the website aligns with user behaviour for enhanced engagement.

4. Appointment Booking System Usage:

    a. Assumption: Users are comfortable using online appointment booking systems.

    b. Implication: The Connect Page with an appointment booking system aligns with user expectations for convenience.

5. Routine Maintenance Schedule Acceptance:

    a. Assumption: Stakeholders accept and understand the necessity of routine maintenance.

    b. Implication: A regular maintenance schedule is feasible and accepted as part of the website's ongoing operational plan.

3.Support Considerations

1. **User Support:**

1.Consideration: Provide accessible and responsive user support channels for inquiries or issues.

2. Implication: Quick and helpful user support enhances the overall user experience and resolves potential problems efficiently.

2. Technical Support:

1. Consideration: Establish a technical support system for addressing website-related technical issues.
2. Implication: Timely resolution of technical challenges contributes to the website's reliability and user satisfaction.

3. Content Update Mechanism:

a. Consideration: Implement an easy-to-use content management system (CMS) for regular content updates.
b. Implication: Regularly updated content contributes to the website's relevance, attracting and retaining visitors.

4. Security Measures:

a. Consideration: Implement robust security measures to protect user data and the website from potential threats.
b. Implication: Prioritizing security safeguards the website's integrity and user trust.

5. Scalability Planning:

a. Consideration: Design the website infrastructure with scalability in mind to accommodate potential growth.
b. Implication: The website can handle increased traffic and additional features without major disruptions.

By considering these assumptions and support considerations, the project team can better align their efforts with user expectations, potential challenges, and long-term sustainability goals for the website.

4. Technical Requirements

1. Website Development:

    a. **Requirement:** The website should be developed using modern web technologies and frameworks, ensuring compatibility with standard web browsers.

    b. **Rationale:** This ensures a seamless and responsive user experience across various devices and browsers.

2. Social Media Integration:

    a. **Requiremen**t: Implement APIs for seamless integration with social media platforms.

    b. **Rationale:** This allows users to easily share, comment, and engage with the website's content on their preferred social media channels.

3. Journey Map:

    a. **Requirement:** Implement interactive mapping technologies for the Journey Map section.

    b. **Rationale:** Enhances user engagement and provides a visual representation of the journey to signature workshops and coaching sessions.

4. Connect Page with Appointment Booking System:

    a. **Requirement:** Integrate a secure and user-friendly appointment booking system.

    b. **Rationale*** Allows users to schedule appointments with Graham directly through the website, streamlining the connection process.

5. Content Management System (CMS):

    a. **Requirement**: Implement a robust CMS for easy content updates.

    b. **Rationale:** Facilitates regular updates to the website's content, ensuring it remains current and relevant.

6. Security Measures:

a. **Requirement:** Implement SSL/TLS encryption to secure user data and communications.

b. **Rationale**: Protects sensitive information and establishes trust with users by providing a secure browsing experience.

7. Scalability:

a. **Requirement**: Design the website infrastructure to be scalable, considering potential future growth.

b. **Rationale**: Ensures the website can handle increased traffic and additional features without compromising performance.

8. User and Technical Support Channels:

a. **Requirement**: Provide easily accessible user and technical support channels.

b. **Rationale**: Enables prompt assistance for users, addressing both general inquiries and technical issues.

9. Routine Maintenance Schedule:

1. **Requirement**: Establish a routine maintenance schedule for updates, bug fixes, and improvements.

2.Rationale: Maintains the website's functionality, security, and relevance over time.

10. Cross-Browser Compatibility:

1. **Requirement**: Ensure cross-browser compatibility for major browsers (e.g., Chrome, Firefox, Safari, Edge).

2. **Rationale:** Guarantees a consistent user experience regardless of the browser used.

These specific technical requirements provide a foundation for the development, operation, and maintenance of the website, addressing key aspects such as functionality, security, user experience, and future scalability. Adhering to these requirements ensures the successful implementation of the project's technical aspects.

5.Network Requirements

1. **Website Hosting:**
   - **Requirement**: Utilize a reliable web hosting service with sufficient bandwidth and storage capacity.
   - **Rationale**: Ensures the website is accessible and performs well, even during periods of high traffic.

2. **Social Media Integration:**
   - **Requirement**: Ensure the website has secure and stable connections to the social media platforms' APIs.
   - **Rationale:** Allows for real-time integration and seamless communication with social media platforms.

3. **Map Integration:**
   - **Requirement:** Optimize the website to efficiently load mapping data by utilizing content delivery networks (CDNs) if necessary.
   - **Rationale**: Enhances the performance of the Journey Map, especially for users with varying internet speeds.

4. **Appointment Booking System:**
   - **Requirement**: Integrate the appointment booking system using secure, encrypted connections (HTTPS).
   - **Rationale:** Ensures the confidentiality of user data during the booking process.

6.Database Requirements

1. User Data Storage:

   a. **Requirement**: Implement a secure relational database (e.g., MySQL, PostgreSQL) for storing user data such as appointment details and contact information.
   b. **Rationale**: Ensures organized and structured storage of user-related information with a focus on security.

2. Content System (CMS) Data:

   a. **Requirement**: Integrate the CMS with a robust database system for storing and retrieving content data efficiently.
   b. **Rationale**: Facilitates the dynamic management of website content and ensures content updates are reflected accurately.

3. Testimonials and Reviews:

   a. **Requirement**: Create a database table for storing and managing testimonials and reviews.
   b. **Rationale:** Enables easy retrieval and display of user testimonials on the website.

4. Mapping Data for Journey Map:

   a. **Requirement**: Utilize a spatial database (e.g., PostgreSQL with PostGIS) for efficient storage and retrieval of mapping data.
   b. **Rationale**: Enhances performance and supports spatial queries for the Journey Map feature.

5. Video and Multimedia Storage:

   a. **Requirement**: Integrate with a scalable multimedia storage solution (e.g., AWS S3) for hosting teaser videos and other multimedia content.
   2. **Rationale**: Ensures efficient delivery of multimedia content and reduces the load on the main database.

6. Security Measures:

   a. **Requirement:** Implement encryption for sensitive data within the database, such as user passwords and personal information.
   b. **Rationale**: Enhances the overall security posture by safeguarding sensitive information against unauthorized access.

7. Scalability:

   a. Requirement: Design the database architecture to be scalable, considering potential increases in data volume over time.
   b. Rationale: Supports future growth and ensures optimal performance as the website attracts more users.

8. Logging and Auditing:

   1. Requirement: Implement logging and auditing mechanisms within the database to track changes and potential security events.
   2. Rationale: Facilitates troubleshooting, monitoring, and maintaining a secure database environment.

9. Backup and Recovery:

   1. **Requirement**: Establish regular automated backup procedures for the database.
   2. **Rationale**: Ensures data integrity and provides a mechanism for recovery in case of data loss or system failures.

10. Integration with External Systems:

   1. **Requirement**: Enable seamless integration with external systems, such as the appointment booking system.
   2. **Rationale**: Facilitates the exchange of data between different components, ensuring a cohesive and integrated system.

7.Security Requirements

1. **Data Encryption:**
   - **Requirement**: Utilize Transport Layer Security (TLS) to encrypt data transmitted between users and the website.
   - **Rationale:** Protects sensitive information during communication, ensuring confidentiality.

2. **Secure User Authentication:**
   - **Requirement:** Implement a secure authentication mechanism, such as multi-factor authentication (MFA), to verify user identity.
   - **Rationale**: Enhances the security of user accounts and prevents unauthorized access.

3. **Authorization Controls:**
   - **Requirement**: Implement role-based access controls (RBAC) to restrict access to certain website functionalities based on user roles.
   - **Rationale:** Ensures that users only have access to the information and features relevant to their roles.

4. **Secure Database Practices:**
   - **Requirement**: Follow secure coding practices and parameterized queries to prevent SQL injection attacks.
   - **Rationale**: Mitigates the risk of unauthorized access and manipulation of the database.

5. **Cross-Site Scripting (XSS) Protection:**
   - **Requirement:** Implement measures to prevent and mitigate cross-site scripting attacks.
   - **Rationale**: Protects users from malicious scripts injected into the website, which could compromise their data or experience.

8. System Requirements

1. **Web Server:**
   - **Requirement**: Deploy a web server (e.g., Apache, Nginx) to host the website.
   - **Rationale:** Serves as the foundation for delivering web content and interacting with users.

2. **Database Server:**
   - **Requirement**: Set up a dedicated database server (e.g., MySQL, PostgreSQL) for storing and managing data.
   - **Rationale**: Facilitates efficient data storage, retrieval, and management.

3. **Programming Languages:**
   - **Requirement**: Use languages like HTML5, CSS3, JavaScript for client-side development, and a server-side language (e.g., Node.js, PHP) for dynamic content.
   - **Rationale**: Enables the creation of interactive and dynamic web pages

4. **Content Management System (CMS):**
   - **Requirement**: Implement a CMS (e.g., WordPress, Drupal) for easy content updates.
   - **Rationale**: Simplifies content management and allows non-technical users to update website content.

5. **Mapping API:**
   - **Requirement**: Utilize a mapping API (e.g., Google Maps API) for the Journey Map feature.
   - **Rationale**: Enables the integration of interactive maps, enhancing user engagement.

6. **Multimedia Storage:**
   - **Requirement**: Integrate with a multimedia storage solution (e.g., AWS S3) for hosting teaser videos and multimedia content.
   - **Rationale**: Ensures efficient storage and delivery of multimedia files.

7. **Appointment Booking System Integration:**
   - **Requirement**: Integrate a reliable appointment booking system with the website.

- Rationale: Facilitates seamless scheduling of appointments and interactions with users.
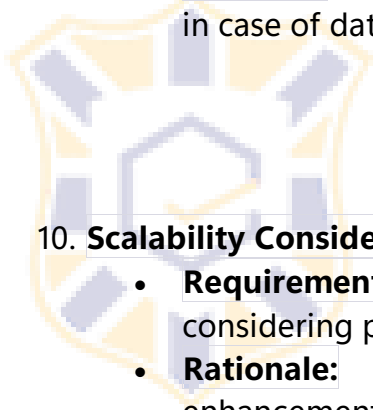
8. **Security Components:**
   - **Requirement:** Include security components such as SSL/TLS certificates, firewalls, and intrusion detection systems.
   - **Rationale:** Enhances the overall security posture of the system.

9. **Backup and Recovery Mechanism:**
   - Requirement: Implement automated backup mechanisms for critical data.
   - Rationale: Ensures data integrity and provides a means of recovery in case of data loss.

10. **Scalability Considerations:**
    - **Requirement**: Design the system architecture to be scalable, considering potential growth.
    - **Rationale:** Accommodates increased traffic and future enhancements without compromising performance.