**AP project Plan: JESMOND LIBRARY VIRTUAL NOTICEBOARD**

**Context:**

The Jesmond Library website project aims to enhance the existing website by improving security, affordability, and user experience. Key objectives include analyzing current system limitations, setting up a secure database and server, implementing SSL certificates, security audits, and data encryption, adding advanced security features, integrating new functions like event bookmarking and cancellation, and updating user manuals. The project emphasizes collaboration between the client and the development team to understand existing challenges and desired improvements. It focuses on a seamless transition, ensuring minimal user disruption while significantly enhancing security and functionality, ultimately creating a secure, user-friendly, and cost-effective online platform for the Jesmond Library community.

**Aim:** This project seeks to keep the current web design of the Jesmond Library website but remodel it into a more secure and affordable platform with additional features.

**Objectives:**

1. To analyze the existing system to identify the limitations.
2. To create a functional database which will be connected to the server.
3. Improve the overall security of the website by implementing robust security measures, including SSL certificates, and data encryption.
4. Identify and implement cost-effective solutions for hosting, maintenance, and software licenses to reduce the operational expenses of the website.
5. Integrate additional features, such as event bookmarking and event cancellation.
6. To prepare an updated user guidance manual and handover files.

**Work Packages:**

1. **Existing System Analysis:**

**System Assessment:** Evaluate the current system's architecture, functionality, and performance.

**Identify Limitations:** Identify and document the limitations and shortcomings of the existing system.

**User Feedback:** Gather feedback from the Client to understand user experience issues.

1. **Database and Server Setup:**

**Database Design:** Create a detailed database schema based on the requirements analysis.

**Server Configuration:** Set up a suitable server environment compatible with the chosen database system.

**Connection Establishment:** Establish a secure connection between the database and server, ensuring data integrity and reliability.

1. **Website Security Enhancement**

**SSL Implementation:** Install and configure SSL certificates to enable secure, encrypted communication between the users and the website.

**Data Encryption:** Implement data encryption techniques to safeguard sensitive user information stored in the database.

1. **Choose affordable hosting, open-source software, and automated maintenance.**

**Cost-Effective Hosting Implementation**

Select a suitable hosting provider, plan and execute the migration, and optimize server resources for performance and security.

**Software License Optimization**

Explore open-source alternatives, negotiate with vendors for discounts, and assess long-term agreements.

**Maintenance Solution Implementation**

Choose a maintenance service or tool, integrate it with the website, automate tasks, provide training, and create documentation.

**Monitoring and Optimization**

Set up performance monitoring tools, analyze data for improvements, regularly review costs, and implement optimizations.

**5. Additional Feature Integration**

**Event Bookmarking:** Develop and integrate a feature allowing users to bookmark events for quick access and reminders.

**Event Cancellation:** Implement a mechanism for event organizers to cancel or reschedule events, notifying attendees promptly.

**6. User Guidance Manual and Handover Files**

**Manual Update:** Revise and update the user guidance manual to incorporate new features and security protocols.

**Handover Files:** Prepare comprehensive documentation and files for handing over the updated system, including technical specifications and troubleshooting guides.

**Deliverables:**

1. A secured online notice board website with additional functionalities

2. Affordable hosting and licensing costs.

3. Report on a well-detailed user guide manual for the newly affected system.

**Key milestones:**

1. Planning and Research – Week 1-4
2. Development and execution – Week 5-8
3. Testing – Week 9- 12
4. Documentation – Week 1-12

**Choosing an affordable licensing and hosting platform:**

1. **SSL Certificate**

SSL certificate is available for free, but the kind of encryption is similar to a paid SSL certificate. But the latter option offers extra features such as a long validity period and customer support. To renew the certificate, you need to pay no or up to $150 every month.

1. **Security Scanning**

Regular(at least frequent) security scans are necessary to maintain your website. You don’t need to wait for a breach to fix security issues. Many free apps and plugins are available, that you can use to scan your website.

But paid website security services scan deeper, identify threats, and help fix critical issues. Such issues can cost you up to $85 per month.

1. **CMS Issues and Updates**

A website tends to function on a Content Management System(CMS) like WordPress that helps you easily upload content. Besides being useful, a CMS is also vulnerable to cyber-attacks. The leading CMSs can quickly fix bugs, but that won’t help your website if you don’t upgrade their older versions.

Many businesses also invest in a custom CMS as there is no maximum limit on the web development price in that case. For frequent updates like WordPress or Joomla, you need to pay $20 to $200per month.

1. **Backup**

Anything may happen to the website at any time! Thus, you should always have a new and full backup, so you don’t lose any important data when a mishap happens, and you have to rework your website.

Though web hosting services tend to offer backup assistance, you need to be careful as they may not back your entire website up very often. You will have backups every day, but you should back up your website at least every few weeks.

Website backup tends to cost between $2.49 to $15 every month. When it comes to web development costs, there is no limit. But if you opt for an extensive maintenance package, you need to pay $200 to $5000 per month. In case your web host’s backup and restoration package are not good enough, you can go for a third-party service.

### ****Technical Support****

It is a simple and small website, and WordPress/other platform’s free customer support works well enough to meet your requirements.

If you want personalized support with guaranteed profits, you need to pay for third-party tech support that may cost from $50 to $3000 every month.

Here is a list of website maintenance charges that you need to pay:

* **Tech support:** $50 to $3000 every month
* **Site backup:**$3 to $10 every month
* **Security scans:**free or up to $100 every month
* **CMS patches and upgrades:** $20 to $200 every month
* **SSL certificate:**free or up to $100 every month

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