

**Software Project Proposal**

**Gold Lotus**

**01286232 Software Engineering Principles**

**Software Engineering Program**

By

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**Python Project Proposal**

**Gold Lotus**

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| **Project Description** (one or two pages)  Welcome to Gold Lotus, your dedicated online hub for spiritual growth, community engagement, and Buddhist education. Join our community to deepen your understanding of Buddhism, connect with like-minded believers, and explore curated resources on your journey to enlightenment. Gold Lotus is more than a website; it's a digital sanctuary where faith and knowledge converge. Welcome to a formal space for profound exploration and connection.  Key Features:   * Homepage with Clear Identity: The homepage should clearly convey the religious identity of the website and its purpose. It should also provide easy navigation to different sections of the site. * Information about Beliefs and Practices: Provide clear and concise information about the beliefs, principles, and practices of the religion or denomination the website represents. * Scriptures and Sacred Texts: Offer access to scriptures, sacred texts, and teachings in digital format for study and reference. * Educational Resources: Include resources such as articles, blogs, videos, and podcasts to educate visitors about the religion's history, rituals, and teachings. * Community Building Tools: Incorporate features that facilitate community engagement, such as discussion forums, chat rooms, or social media integration. * Events Calendar: Display a calendar of religious events, services, ceremonies, and gatherings that visitors can attend or participate in. * Online Worship Services or Sermons: Offer live streaming or recorded versions of worship services, sermons, or religious lectures for those unable to attend in person. * Prayer Requests and Support: Provide a platform for visitors to submit prayer requests or seek spiritual support from the community or religious leaders. * Google Maps Temple Locator:   Enable users to find nearby temples using the Google Maps API. Input location or use geolocation to discover temples, with details like name, address, and contact information. Enhance the user experience by providing a practical tool for locating temples and filtering options for a tailored search.   * Multimedia Gallery: Showcase photos, videos, and audio recordings of religious ceremonies, events, and activities. * Mobile Responsiveness: Ensure the website is optimized for mobile devices to accommodate users accessing it on smartphones and tablets. * Accessibility Features: Implement accessibility features to accommodate users with disabilities, such as screen readers, alternative text for images, and keyboard navigation.   **Software Requirements**  **User Requirements**  Functional Requirements (10 items)   1. The system shall provide user login with password protection for user and admin roles. 2. The system shall provide APIs for users to give useful information.    1. Google Map    2. Thai Buddhist Calendar 3. The system shall provide the user with the ability to manage their own account.    1. Full Name    2. Username    3. Email Address    4. Postal Address    5. Phone Number    6. Donate Method 4. The system shall provide an activity log if any changes occur within the system.    1. Successful status    2. Modified status    3. Cancel status 5. The system shall provide the user with the Buddhist course (integrated videos and images) 6. The system shall provide the ability to do Buddhist activity online.    1. Meditation    2. Buddhist proverbs    3. Giving donations    4. Chanting    5. Pilgrimage 7. The system shall provide the ability to track progress in learning and practicing Buddhism, such as completing courses, attending events, or achieving milestones in their spiritual journey. 8. The system shall provide a feedback mechanism where users can share their thoughts, suggestions, and concerns about the platform's content, features, and user experience, helping improve overall quality. 9. The system shall provide users with the ability to easily share content from the platform on their social media accounts and integrate features that enable seamless sharing of experiences and insights across different platforms. 10. The system shall provide the formation of peer support groups within the community, where users with similar interests or challenges can connect, share experiences, and provide mutual support.   Non-Functional Requirements (10 items)   1. The system must respond to user within 3 seconds when the user clicks any button in the application 2. The system must have a good security system to protect the user’s data and user authentication. 3. The system must have explicit instructions for navigating the user through the application 4. The system must have a maximum number of attempts to enter the password, which will be three. 5. The system must have a notification when it has an error. 6. The system must have an appearance (UI) that looks usable for the user on every page that the application includes. 7. The system must be able to run in these operating systems. There are MAC, Windows, and Linux operating systems. 8. The system must be stable during the high uptime, which can at least service 10,000 users simultaneously. 9. The system must be able to restart after encountering failure within 5 minutes. 10. The system must handle when the application encounters an error from the APIs including google map and Thai Buddhist Calendar.   **System Requirements**  Functional Requirements (10 items)   1. The system shall provide a secure user authentication system to allow registered users to access personalized features and ensure proper authorization for different levels of access based on user roles. 2. The system shall provide a recording of the timestamps of the order. 3. The system shall provide a system for hosting and streaming multimedia content, ensuring reliable delivery of videos, live streams, audio recordings, and other multimedia assets across different devices and network conditions. 4. The system shall Incorporate analytics tools to track user engagement metrics, such as website traffic, content popularity, user interactions. 5. The system shall update data in the database after data has changed. 6. The system shall provide split data tables in databases.    1. The system uses the relational database to join and pair data. 7. The system shall include search feature that should give option to sort the search result in 5 seconds. 8. The system shall provide two user access levels, which will be determined by the login verification.    1. Admin    2. Staff    3. User 9. The system shall implement session management to securely handle user sessions, including authentication tokens and session timeouts, to prevent unauthorized access and ensure data security. 10. The system shall allow administrators to categorize and tag multimedia content for efficient organization and navigation, enhancing user experience and content discoverability.   Non-Functional Requirements (10 items)   1. The system must be developed by using HTML, CSS, JS programming language. 2. The system must be developed by using the Python3 programming language.    1. Python3 is an object-oriented programming language.    2. Python supports many libraries and has its own package manager. 3. The system must be developed following the PEP8 Code formatting for maintaining the code standard throughout the project. 4. The system must be developed using the PyScript framework.    1. PyScript is designed for developing applications for websites.    2. PyScript has a tool for developing client-side applications. 5. The system must be using an object-oriented database, ZODB.    1. The Zope Object Database (ZODB) is an object-oriented database for transparently and persistently storing Python objects. 6. The system must be secure login and authentication using cookies. 7. The system must be developed using 1920x1080 or 16:9 resolution. 8. The system must be using a responsive design for mobile, tablet, laptop, and desktop. 9. The system must be version controlled locally under Git. 10. The system must use GitHub as the online version control system.     1. GitHub is free to use.     2. GitHub allows collaboration between developers.   **Draft of a GUI Design of your (provisional) Program (at least three screens)**  Screen 1    Screen 2    Screen 3 |