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**Software requirement specification (SRS) document template.**

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**By**: Anwar Ali Zeidani.

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# Feasibility Study.

* **Technical feasibility:**
  1. **Technology Exists:** The technology to build learning websites is mature and readily available. Many website building platforms offer features specifically designed for creating online courses.
  2. **Open-Source Options:** There are many open-source tools and frameworks available for building learning websites, making it cost-effective for some projects.
  3. **Technical Expertise:** Depending on the chosen platform and desired features, you may need developers with specific skillsets (web development, learning management systems) to build the website.
* **Market Analysis:**
  1. Market Need: We are targeted the growthy of self-learners that needs an efficient way to learn with interactive learning platform
  2. Target Audience: We are offering multiple features to meet the target audience and the user experience. Self-learning or online-learning is a very popular idea now because of increasing in people who wants to learn and practice on the same place.
  3. Competition: There is a lot of e-learning website because as we said before self-learning is a very popular than ever. In this case we should use their weaknesses to solve it in our project. Ex: The learner tracking mechanism and practice for every idea to meet the user need and to deal with users that want to learn, practice and tracking him in which they had a problems, or who want to get certificate.
* **Operational feasibility:**
  1. Technical Requirements: All features and technical problems are offering from multiple sources and many standards that meets the project technical stuff.
  2. Content Creation:We are offering a high-quality content. By support from experts in this domain, and support from psychology experts to keep the learner attention and high-comfortable user experience.
  3. Delivery Method: Our website doesn’t limit the user in one way to learn. There are multiple ways that user can benefits from. Some features (ways) are paid, and the others are fully free.
* **Financial Feasibility:**
  1. Development Costs:Our budget meets the cost of each technical stuff and helping from experts, and our team is ready to developed and maintain any future problems.
  2. Revenue Model:There are multiple ways to get the income from our platform. We have a paid features in the website, posters on the free features.
  3. **Marketing & Advertising:** In our marketing plan, we are targeting people who interested in our content by using social media platform posts, and strategies that take in point of view each area has most interactive with our platform and what their feedback and so on.
  4. **Break-Even Analysis: At the beginning, we need approximately between 600 to 1000 user that interact with our system to reach our revenue.**
* Risk Assessment:
  1. **Technology Risks: Our plan ensure availability, confidentiality, integrity of our system, and user Data, but there is a lot of risks that should be handle and an regularly patch releases.**
  2. **Content Quality: By put and email feedback and stars rate in our website we can ensure the content quality and updates it to meet the user needs.**

Our project meets the privacy regulations and intellectual property laws. Ensure the scalability by planning for the future growth, and by using multiple mechanisms to handle the increasing user base without compromising performance.

# **Introduction**

1. **Product Scope:** 
   1. **Benefits**: **For learners:** Learn anytime, anywhere with an internet connection. Learn at your own pace and revisit materials as needed. Access a wide range of courses on diverse topics. Often cheaper than traditional classroom learning. Learn new skills and knowledge continuously.
   2. **Objectives:** Provide high-quality, engaging learning experiences. cater to the specific needs of the target audience. Offer a variety of courses on relevant and in-demand topics. Make learning accessible and convenient for learners. Promote active learning and knowledge retention. become a trusted resource for learners seeking to expand their knowledge and skills
   3. **Goals:** Increase user base and website traffic. Convert visitors into paying customers. Generate revenue through subscriptions, course fees, or corporate training. Establish a strong brand reputation for quality education. Increase learner engagement and completion rates. Become a leading platform in a specific learning niche. Develop a community of learners who can interact and share knowledge.
2. **Product Value:**
   1. Focus on in-demand skills or knowledge relevant to your audience's career goals or personal interests. Offer a curated selection of courses that fill specific knowledge gaps.
   2. Provide practical, actionable learning experiences that translate into real-world skills. Offer clear learning objectives and assessments to measure progress.
   3. Cater to individuals seeking to upskill or reskill for career advancement. Offer courses aligned with industry certifications or job requirements.
   4. Allow learners to access content anytime, anywhere on their schedule.
   5. Cater to different learning styles by offering flexible pacing and the ability to revisit materials.
   6. Develop high-quality learning materials using diverse formats like videos, interactive modules, downloadable resources, and quizzes.
3. **Intended Value:**
   1. **Professionals:** Individuals seeking to update their skillset for career advancement or to transition into new roles.
   2. **Lifelong Learners**: People with a passion for continuous learning and personal development who want to explore new hobbies, interests, or broaden their knowledge base.
   3. **Students & Educators**: Students seeking supplemental learning materials or alternative learning methods, and educators looking for online resources to enhance their curriculum.
   4. **Business Professionals**: Companies or organizations seeking training programs for their employees on specific skills or industry knowledge.
4. **Intended Use:**
   1. **Upskilling Professionals:** They'll use our website to search for specific skill-based courses or pre-curated learning paths aligned with their career goals. They'll value features that track their progress and completion of courses, potentially offering industry-recognized certifications.
   2. **Lifelong Learners:** They'll explore the course library based on interests, browsing by category, topic, or instructor. They'll appreciate a variety of engaging content formats like video lectures, interactive exercises, downloadable materials, and quizzes.
   3. **Students & Educators:** Students might use our website for additional practice or to explore topics in more depth outside of class.  Educators could potentially integrate specific learning modules or assessments from your website into their curriculum.
   4. **Business Professionals:** Companies might utilize your platform to deliver customized training programs for employees on specific software, industry regulations, or company policies.

**Functions:**

* **Content Delivery:** Provide a platform to deliver educational content in various formats (videos, text, quizzes, downloadable resources).
* **Learning Management:** Manage user enrollment, track learner progress, and offer completion certificates.
* **Assessment:** Evaluate learner understanding through quizzes, assignments, or practical exercises.
* **Community Building:** Facilitate interaction between learners through discussion forums, Q&A sessions, or group projects (optional).
* **E-commerce:** Process payments for subscriptions, course fees, or other transactions (if applicable).

**Features:**

* **Course Library:** A searchable catalog of courses categorized by topic, skill level, or target audience.
* **Content Management System:** A user-friendly interface for uploading, editing, and managing learning content.
* **Learning Management Tools:** Features to track learner progress, completion rates, and performance data.
* **Personalized Learning:** Recommendations for courses based on user interests and progress.
* **Interactive Elements:** Quizzes, polls, discussions, and other interactive features to enhance engagement.
* **Mobile Compatibility:** A website layout that adapts seamlessly to various devices (phones, tablets, desktops).
* **Search Functionality:** A powerful search bar to help users find relevant courses and learning materials.
* **Security & Privacy:** Secure user logins, data encryption, and compliance with relevant privacy regulations.

# Functional Requirements

1. **Design Requirements:**

* **User-Friendly Interface (UI):** The website should be easy to navigate and understand, with clear menus, intuitive icons, and consistent layout across all pages.
* **Responsive Design:** The website should adapt seamlessly to different screen sizes and devices (desktop, mobile, tablet) for optimal user experience.
* **Accessibility:** The website should be accessible to users with disabilities, following WCAG (Web Content Accessibility Guidelines) to ensure features like closed captions, screen reader compatibility, and proper color contrast.
* **Focus on Content:** The design should prioritize clear and well-organized presentation of learning materials.

1. **Graphics Requirements:**

* **High-Quality Images & Videos:** Professional and visually appealing graphics are crucial for a positive user experience.
* **Consistent Style:** Maintain a consistent visual style for images, icons, and other graphic elements to create a recognizable brand identity.
* **Scalability:** Graphics should be optimized for different screen sizes and web formats to ensure proper display.
* **File Size Optimization:** Balance image quality with file size to avoid slow loading times.

1. **Operating System (OS) Requirements:**

* **Wide Browser Compatibility:** The website should function correctly on popular web browsers across different operating systems (Windows, macOS, Android, iOS).
* **Consider Minimum Requirements:** Specify the minimum OS version or browser version your website can support to maintain a balance between accessibility and technical complexity.

# User Interface Requirements

* **Intuitive Navigation:** Users should be able to find what they need quickly and easily.
* **Clear Hierarchy:** Information architecture should be well-organized, with a clear hierarchy of pages and content.
* **Consistency:** Maintain a consistent layout, style, and user experience across all pages.
* **Accessibility:** Ensure all elements are accessible to users with disabilities.
* **Homepage:**
  + Showcase featured courses, popular categories, and value propositions.
  + Include a search bar for easy course discovery.
  + Provide clear calls to action (CTAs) for registration or course browsing.
* **Course Catalog:**
  + Organize courses by category, skill level, or target audience.
  + Display key information like course title, instructor, duration, and difficulty level.
  + Allow filtering and searching based on specific criteria.
* **Course Landing Page:**
  + Provide a detailed overview of the course content, learning objectives, and instructor information.
  + Include visuals like trailers or screenshots.
  + Offer CTAs for enrollment or adding the course to a Wishlist.
* **Learning Interface:**
  + Present course content in a clear and visually appealing format.
  + Use a consistent layout for video lectures, text modules, quizzes, and downloadable resources.
  + Integrate progress tracking indicators and navigation tools.
* **User Profile & Settings:**
  + Allow users to manage their profile information, track progress, and view completed courses.
  + Offer options to personalize learning preferences and notification settings.
  + Include a secure login area for user accounts.
* **Style Guides:**
  + Color palette
  + Typography (fonts and font sizes)
  + Button styles
  + Iconography
  + Imagery style

# Hardware interface requirements

**Supported Devices:**

* The website should be designed for responsive functionality across a range of devices, including:
  + Desktop computers (Windows, macOS)
  + Laptops (Windows, macOS)
  + Mobile phones (Android, iOS)
  + Tablets (Android, iOS)

**Network Requirements:**

* **Minimum Bandwidth:** Specify the minimum internet connection speed required for smooth operation.
* **Reliable Connection:** Users will need a stable internet connection to access streaming content, download materials, and participate in interactive features.
* **Data Usage:** Consider offering downloadable resources or offline access options for users on limited data plans.

**Communication Protocols:**

* HTTPS
* Latest HTTP version.
* Ftp (File transfer protocol).
* Deployed Server.
* DNS server.
* **Streaming Protocols like (**HTTP Live Streaming).
* ETC…

# Software interface requirements

* **User-Friendly Navigation.**
* **Appealing Design.**
* **Responsive Design.**
* **User Interaction.**
* **Personalization Features.**
* **Performance Optimization.**

**Communication interface requirements**

* **By email.**
* **Website feedback.**
* **Discussion Forums.**
* **Communication with professors via email.**

# Non-Functional Requirements

* **Security:** 
  + **Data Security:** Protect user data (login credentials, payment information) with strong encryption protocols and secure storage practices.
  + **Content Security:** Safeguard learning materials (course content, quizzes, assessments) from unauthorized access or modification.
  + **Regular Security Updates:** Implement regular updates for the website platform, plugins, and to address potential vulnerabilities.
* **Capacity:**
  + **Current Needs**:
* **Text Content:** Course descriptions, learning objectives, quizzes, downloadable resources, and user-generated content like forum posts all require storage space.
* **Images & Icons:** Visually appealing graphics enhance the learning experience, but require storage depending on file size and quantity.
* **Audio & Video:** Video lectures, podcasts, or other multimedia content can significantly increase storage needs. Consider offering transcripts for accessibility and reduced storage demands.
* **User Data:** User profiles, login credentials, course progress data, and completion certificates need secure storage.
* **Future Needs:**
  + **Anticipate Growth:** Plan for increased storage needs as your website gains more users and offers more courses.
  + **User-Generated Content:** website allows user-generated content like video assignments or discussion forum posts, factor in the potential storage growth.
* **Optimizing Storage:**
* **Content Compression:** Utilize compression techniques for images and videos to reduce file size without sacrificing quality.
* **Version Control:** Implement version control for text content to avoid storing unnecessary duplicates.
* **Data Archiving:** Archive or purge inactive user data or outdated course materials to minimize storage usage.
* **Compatibility:**
  + **Expected User Traffic: It depends on the number of users interact with the system.**
  + **Content Type:** text-based content will require less processing power compared to those featuring video lectures and interactive elements.
  + **Features & Functionality:** Complex functionalities like user uploads, live chat, or intricate course management tools will require more robust hardware.
  + **Minimum requirements:**
    - **Processor (CPU):** At least a dual-core processor with a clock speed of 2.0 GHz or higher (e.g., Intel Core i3 or AMD Ryzen 3).
    - **Memory (RAM):** Minimum of 4 GB RAM, but 8 GB is highly recommended for smoother performance.
    - **Storage:** Solid-State Drive (SSD) with at least 256 GB of storage space. SSDs offer faster loading times compared to traditional hard drives.
    - **Operating System:** A recent version of a stable operating system like Windows 10 (64-bit) or a Linux distribution like Ubuntu Server LTS.
* **Reliability:**
  + **Unpredictable Failure Events:** Failures in a website can occur due to various reasons like software bugs, hardware malfunctions, cyberattacks, or network outages. These events are often unpredictable and can happen at any time.
  + **Normal Usage is Subjective:** "Normal usage" can vary significantly depending on the website's features, user base, and traffic patterns. Peak usage hours might put more strain on the system compared to off-peak times.
  + **Implement Proactive Maintenance.**
  + **Monitor System Performance.**
  + **Scalable Infrastructure.**
* **Scalability:**
  + **Monitoring & Analytics:** We use some strategies like monitoring the system traffic and the load speed of the system. Then we calculate approximate highest workload that the system can handle with an expected performance.
* **Maintainability:**
  + **Developer Makes Changes:** A developer creates a new feature, fixes a bug, or updates existing code.
  + **Version Control System (VCS) Commit:** The developer commits the changes to a version control system (VCS) like Git.
  + **Trigger Build Pipeline:** The VCS commit triggers a build pipeline within the CI tool.
  + **Automated Builds & Tests:** The CI tool automatically builds the website code, runs unit tests, integration tests, and any other automated checks configured in the pipeline.
  + **Continuous Feedback:**
    - c
  + **Manual Review & Deployment (Optional):**
    - Developers can manually review the website in the staging environment before deploying it to production.
    - Once approved, the CI tool can automate the deployment process to the live website.
* **Usability:** When we build a product with high performance, high security, reliability, maintainability, and other topics the system should ensure. If the user doesn’t know how to use this system or some features, then the system is failed. This is why we ensure the usability in our platform to meet different levels of computer users.

# SDLC Model

* **I want to use Agile Model because of its Flexibility and Adaptability. It supports the changes of requirements and give new features.**
* **Fast Feedback Loops: Agile promotes short development cycles with regular releases and feedback loops. This allows you to identify and fix issues quickly, ensuring a high-quality learning experience**.
* **This helps ensure the website caters to the specific needs and learning styles of your target audience**.