|  |  |  |  |
| --- | --- | --- | --- |
| **Review history** | | | |
| **Approving party** | **Version approved** | **Signature** | **Date** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Approval history** | | | |
| **Reviewer** | **Version reviewed** | **Signature** | **Date** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

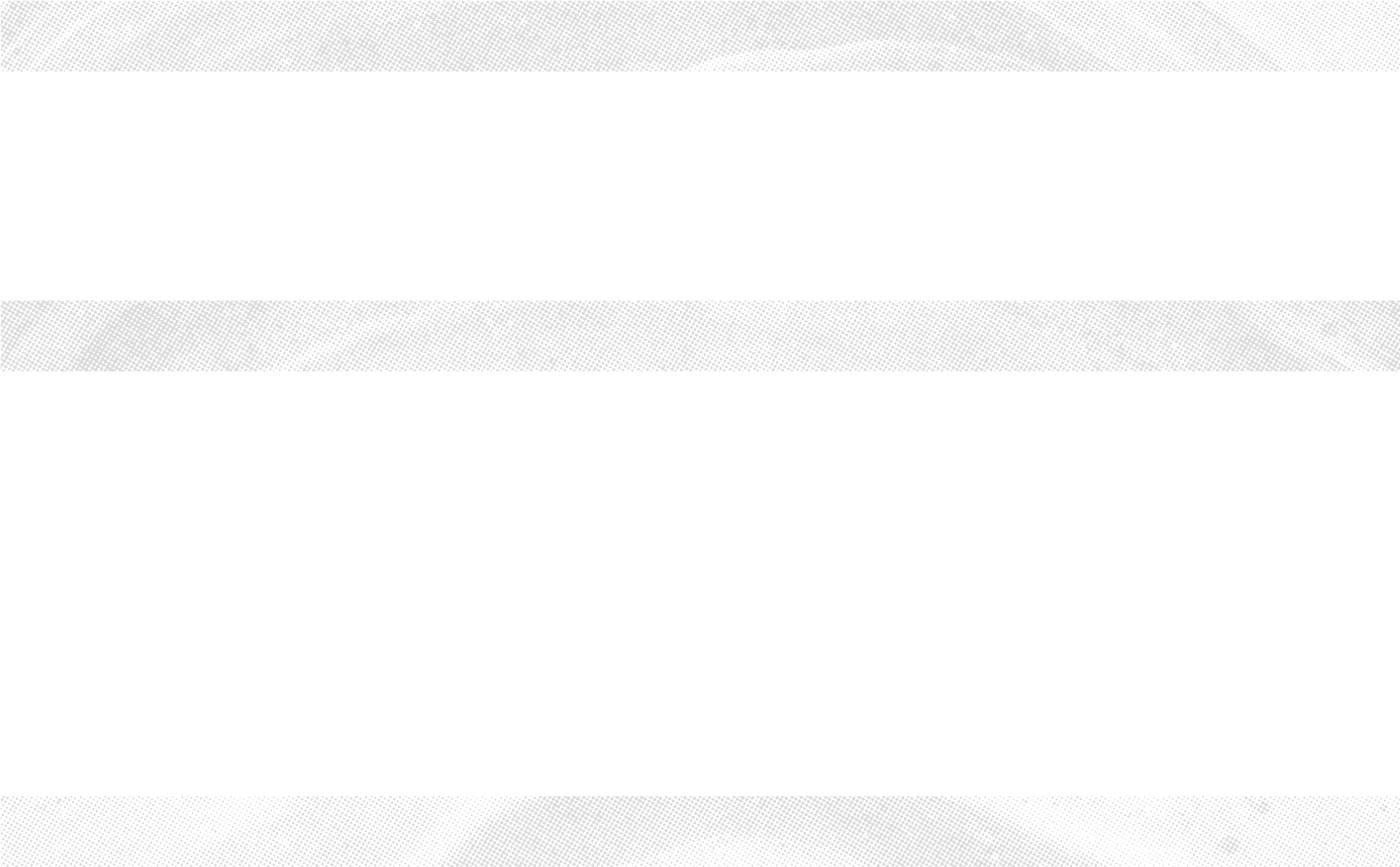
|  |  |  |  |
| --- | --- | --- | --- |
| **Revision history** | | | |
| **Version** | **Author** | **Version description** | **Date completed** |
|  |  |  |  |

A logo of a university

Description automatically generated**Software Engineer Project Phase 1:**

**Project name: 360 learning**

**Date:**

**Version:1.0**

**By: Ahmad Ghraieb**

# Table of contents

**Feasibility Study**

**SDLC Model**

**1.2**

**1.1**

**Introduction**

**1.3**

**Product scope**

**1.4**

**Product value**

**1.5**

**Intended audience**

**1.6**

**Intended use**

**General description**

**1.7**

**Functional requirements**

**External interface requirements**

**3.1**

**User interface requirements**

**3.2**

**Hardware interface requirements**

**3.3**

**Software interface requirements**

**3.4**

**Communication interface requirements**

**Non-functional requirements**

**4.1**

**Security**

**4.2**

**Capacity**

**4.3**

**Compatibility**

**4.4**

**Reliability**

**4.5**

**Scalability**

**4.6**

**Maintainability**

**4.7**

**Usability**

**4.8**

**Other non-functional requirements**

**Definitions and acronyms**

**1**

**2**

**3**

**4**

**5**

# Introduction:

**1.1 SDLC Model:**

Agile Model:

Why: Agile is well-suited for projects with changing requirements and a need for frequent releases. In the case of an online learning platform, where user feedback and evolving educational trends are crucial, Agile allows for flexibility and continuous improvement. It supports iterative development, which is beneficial for adapting to changing educational needs and incorporating user feedback throughout the development process.

**1.2 Feasibility Study:**

**1. Technical Feasibility:**

* + Skill set of the development team.
  + Compatibility with existing browsers.
  + Potential technical challenges and their solutions.

**2. Economic Feasibility:**

* + Cost estimation for development, deployment, and maintenance.
  + Revenue generation potential.

**3. Market Feasibility:**

* + Identification of target audience.
  + Market trends and competition analysis.
  + Marketing and distribution strategies.

**4. Legal Feasibility:**

* + Licensing and permissions.
  + Identification and reduction of legal risks.

**5. Operational Feasibility:**

* + User acceptance and training.
  + Support and maintenance requirements.
  + Compatibility with existing organizational culture.

**6. Scheduling Feasibility:**

* + Realistic development timelines.
  + Phasing of project deliverables.

|  |  |
| --- | --- |
| **1.3 Product scope** | * **Benefits:** * **Enhanced accessibility to quality education.** * **Foster interactive learning through a user-friendly platform.** * **Objectives:** * **Provide a diverse range of courses and lessons.** * **Facilitate collaborative learning experiences.** * **Goals:** * **Increase user engagement and satisfaction.** * **Support various learning styles through a feature-rich platform.** |
|  |  |
| **1.4 Product value** | * **Access to quality education** * **Personalized learning experiences.** * **Collaboration opportunities with colleagues.** * **Progress tracking and achievement recognition.** |
|  |  |
| **1.5 Intended audience** | * **Students of all ages.** * **Educators and instructors.** * **Lifelong learners seeking flexible educational resources.** |
|  |  |
| **1.6 Intended use** | * **Enroll in courses.** * **Participate in interactive lessons.** * **Collaborate with colleagues.** * **Track their learning progress.** |
|  |  |
| **1.7 General description** | * **Course management (creation, enrollment).** * **Interactive lessons (videos, quizzes).** * **Collaborative tools (forums, group projects).** * **Progress tracking tools** |

# Functional requirements

**Design Requirements:**

* **Intuitive and responsive web interface.**
* **Mobile-friendly design for on-the-go learning.**

**Graphics Requirements:**

* **Clear and engaging visual elements for course content.**
* **Visual aids for interactive lessons.**

**Constraints:**

* **Compliance with relevant educational standards and regulations.**
* **Adherence to data protection and privacy laws.**

# External interface requirements

|  |  |
| --- | --- |
| **3.1 User interface requirements** | * **Users can navigate with ease.** * **Clear screen layouts and style guides.** |
|  |  |
| **3.2 Hardware interface requirements** | * **Supported different devices Computers, laptops, tablets, and smartphones.** * **Stable internet connection** |
|  |  |
| **3.3 Software interface requirements** | * **Frontend/backend framework (e.g., React for frontend, Django for backend).** * **Combination with libraries for specific functionalities** |
|  |  |
| **3.4 Communication interface requirements** | * **System notifications for updates and announcements.** * **Embedded forms for user feedback.** * **Email notifications for important communications.** |

# Non-functional requirements

|  |  |
| --- | --- |
| **4.1 Security** | * **Compliance with GDPR, HIPAA, or other relevant data protection laws.** * **Implementation of encryption protocols for secure data transmission** |
|  |  |
| **4.2 Capacity** | * **Current storage needs: Estimate the initial volume of course content, user data, and multimedia files.** * **Future storage needs: Plan for scalability and increased user-generated content.** |
|  |  |
| * 1. **Compatibility** | * **Ensure compatibility with major web browsers, including but not limited (Google Chrome/ Mozilla Firefox/ Apple Safari/ Microsoft Edge)** |
|  |  |
| **4.4 Reliability** | * **Define the acceptable downtime under normal usage.** * **Set recovery time objectives to ensure quick system restoration.** |
|  |  |
| **4.5 Scalability** | * **Determine the maximum number of concurrent users the system should handle.** * **Assess the system's ability to scale under increased user loads.** |
|  |  |
| **4.6 Maintainability** | * **Documentation for developers and administrators for codebase understanding and system maintenance.** |
|  |  |
| **4.7 Usability** | * **Implement an intuitive and user-friendly interface.** * **Conduct usability testing to ensure ease of navigation and understanding.** |
|  |  |
| **4.8 Other** | **Offline Functionality:**   * **Consider providing offline access to certain course materials for users with limited internet connectivity.**   **Accessibility:**   * **Comply with accessibility standards (WCAG) to ensure the platform is usable by individuals with disabilities.** |

# Definitions and acronyms

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |