

Software Project Management Plan

Project Name: Online Learning Platform

Date: 1 April 2024

Revision: Version 3.0

Author: Group 2

Summary: SkillSpark Online Learning Platform is an innovative project aimed at providing a comprehensive and user-friendly platform for individuals seeking to enhance their skills and knowledge.

Revision Page**a. Overview**

The Software Project Management Plan (SPMP) provides a comprehensive framework for managing the development and delivery of the SkillSpark Online Learning Platform. This document outlines the project scope, objectives, schedule, resources, and deliverables. The SPMP also establishes the roles and responsibilities of the project team and identifies the communication and risk management strategies that will be employed. This plan serves as a roadmap for the project team to follow and provides a foundation for monitoring and controlling the project to ensure that it is completed within scope, on time, and within budget.

b. Target Audience

The target audience for the Online Learning Platform project will be students and tutor. The portal aims to revolutionize online learning by offering a dynamic and interactive platform accessible to learners worldwide. Through a diverse range of courses, it strives to empower individuals of all backgrounds to enhance their skills and knowledge in various domains.

c. Project Team Members

Name	Role/Title	Email
Amirul Aiman	Software Development Developer	amirulaimanrohaimi@gmail.com
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d. Version Control History

Version #	Status	Date	Section, Page(s) and Text Revised	Modified by
1.0	Initial	19-March-2024	SPMP v1	Amirul, Zulhusni
2.0	Revision	22-March-2024	SPMP v2	Amirul, Zulhusni
3.0	Revision	28-March-2024	SPMP v3	Amirul

Software Project Management Plan

This portion of the paper introduces “Group 2” proposal to create and construct the "Online Learning Platform" project's software development segment for the customer, SkillSpark.com. It will include the project's overall goals and the objectives that must be met, the project's scope and the deliverables it aims to produce, the project's assumptions and limits, certain commitments made to the client, and a quick rundown of the project's budget and timetable.

1. Project Summary

Project Name	Online Learning Platform
Customer Name	SkillSpark.com
Project Start Date	March 15, 2024
Project End Date	April 1, 2024
Project Type (Development, Feasibility)	Web Development
Platform	Netbeans, IntelliJ IDEA, Glassfish, Java EE

1.1 Project Objectives and Scope

1.1.1 Purpose

The purpose of this project is to create an accessible and interactive online learning platform, empowering individuals to enhance their skills and knowledge in diverse fields, fostering personal growth and lifelong learning.

1.1.2 Objectives

The objective of this project is :

1. to provide learners with practical skills and knowledge that match their personal and professional goals, enabling them to learn conveniently and at their own pace.
2. to Provide an interactive and user-friendly platform that facilitates seamless learning experiences for individuals of all backgrounds and levels of expertise
3. to offer a diverse range of courses covering various disciplines to cater to the diverse interests and learning needs of users.
4. to foster a culture of continuous learning and personal development, empowering users to adapt to the ever-changing demands of the modern world.

1.1.3 Project Scopes

The project scope encompasses the development and implementation of the SkillSpark Online Learning Platform. This includes the design, development, testing, and

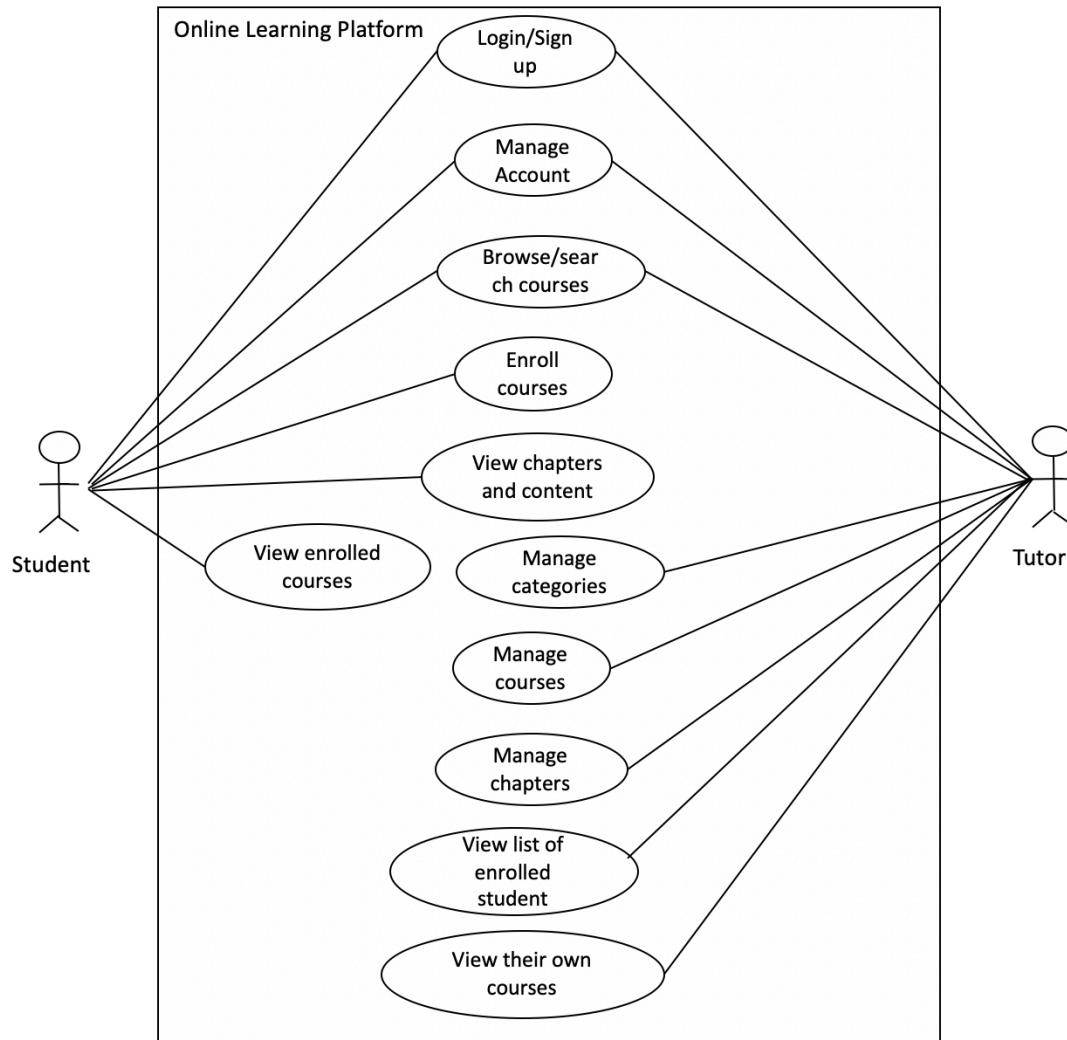
deployment of a comprehensive web application tailored to facilitate online learning experiences. Key components of the platform include user authentication, course management, content delivery, interactive features, student and tutor functionalities. The scope also includes the integration of various technologies such as Java EE 8, JDK 1.8, Glassfish 4, JSP, Maven, and Bootstrap to ensure a seamless user experience. Additionally, the scope covers the creation of a user-friendly interface, accessible to learners of all backgrounds, and the provision of diverse course offerings to cater to different interests and skill levels. Ongoing maintenance and support of the platform are also within the project scope to ensure its continued functionality and effectiveness..

1.2 Project Contact Personnel

Name, Title, Expertise, Responsibility	Phone Number	Email Address
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2. Project Planning

2.1 Case Diagram



Student

When a student logs in, the system displays a student dashboard with choices to choose courses from the catalog, view student enroll courses and manage account settings. The student dashboard allows the student to view all the courses, view all the categories, and

student can selected the courses card and view the courses content. The courses content screen will displays all the chapters of the courses and student user can enrol by click on the enrol button.

Tutor

When a tutor logs in, the system will show tutor dashboard page where its show all courses that created by the tutor. Tutor also can manage a categories, courses, and chapters to create, edit or delete them by clicking on the side filter bar. There are also a list of enrol students options where tutor can view, delete of students that have enrolled to their own courses.

Input and Output

Sign-Up

Action	Input	Output
To login into system users must enter their information by sign-up to the system.	-name -email -password	Success login will redirect to login page otherwise error message will appear

Login

Action	Input	Output
User want to enter the system	-email -password	Success login will redirect to main page according to roles. Otherwise error message will appear

Explore Page

Action	Input	Output
User can view course and view course by category	-nan	Display course page and view the details of courses.

Tutor Main Page

Action	Input	Output
Tutor can view he/she own course	-success login - has user session	Display course page and view the details of courses.

View Categories

Action	Input	Output
Tutor can view all categories	-success login - has user session	Display all categories registered to the system

Add Categories

Action	Input	Output
Tutor can add categories	-name - description	Success add pops up success notification, otherwise error message will pop up

Update Categories

Action	Input	Output
Tutor can update categories	-id -name - description	Success update pops up success notification, otherwise error message will pop up

Delete Categories

Action	Input	Output
Tutor can delete categories	-id	Success delete pops up success notification, otherwise error message will pop up

Add Course

Action	Input	Output
Tutor can add course	-category_id -tutor_id -name -durations -description -status -difficulties -created_at	Success add pops up success notification, otherwise error message will pop up

Update Course

Action	Input	Output
Tutor can update course	-id -category_id -tutor_id -name -durations -description -status -difficulties -created_at	Success update pops up success notification, otherwise error message will pop up

Delete Course

Action	Input	Output
Tutor can delete course	-id	Success delete pops up success notification, otherwise error message will pop up

Add Chapter

Action	Input	Output
Tutor can add chapter	-course_id -title -name -videopath -description -status -level -created_at	Success add pops up success notification, otherwise error message will pop up

Update Chapter

Action	Input	Output
Tutor can update chapter	-id -course_id -title -name -videopath -description -status -level -created_at	Success update pops up success notification, otherwise error message will pop up

Delete Chapter

Action	Input	Output
Tutor can delete chapter	-id	Success delete pops up success notification, otherwise error message will pop up

View Enroll Student

Action	Input	Output
Tutor can view enroll student	-id -has session	Tutor can view student who enroll his/hers course.

Remove Enroll Student

Action	Input	Output
Tutor can remove enroll student	-id -student_id -has session	Tutor can remove student who enroll his/hers course.

Student Main Page

Action	Input	Output
Student can view all available course	-success login - has user session	Display course page and view the details of courses.

Student Enroll Course

Action	Input	Output
Student can enroll all available course	-success login - has user session -student_id -course_id	Success enroll pops up notification and redirect to enroll page

Logout

Action	Input	Output
All user can logout	-nan	Success logout bring to login page

Search

Action	Input	Output
All user can search courses for role student and own courses for tutor	-course_name	Success search will display the searched courses

2.2 Database Design

2.2.1 Roles

- id
- name
- description

2.2.2 Users

- id
- role_id
- name
- email
- password
- profile_picture
- join_date
- created_at

2.2.3 Categories

- id
- name
- description

2.2.4 Courses

- id
- category_id
- tutor_id
- name
- durations
- description
- status
- difficulties
- created_at

2.2.5 Chapters

- id
- course_id
- title

- name
- videopath
- description
- status
- level
- created_at

2.2.6 Enrolls

- id
- student_id
- course_id
- date_enroll

2.3 Development Environment

2.3.1 Software and Tools Requirements

Development	Frontend	Backend	Database
IDE	Netbeans, Intellij IDE	Netbeans, Intellij IDE	Navicat, Data Grip
Code Language	Java JSP, AJAX	Java JDK 8	Postgres
Framework	Bootstrap	Java EE	-
Deploy & Hosting	localhost	localhost	localhost
Version control	Git	Git	-

3. System Interfaces

The SkillSpark Online Learning Platform has many functionalities and features. The system includes a few interface designs with intent purposes and some of the features are only available for specific users only. For example, the tutor users have its own interfaces that student users cannot access. So, the system must consider the design and the functionalities, functional requirement, context diagram and use case diagram will be determined to achieve the system's objective. The following is a list of the sketch interface designs that were created using wireframe.cc as references:

- **Login page**

The wireframe shows a login page layout. At the top, there is a header bar containing a logo placeholder, four navigation buttons labeled 'Catalog', 'Resource', 'Community', and 'Pricing', a search icon, and a 'Sign Up' button. The main body of the page contains a large placeholder for a logo, followed by the text 'Login in to SkillSpark'. Below this, there are two input fields for 'Email' and 'Password', each with a small 'I' character as a placeholder. A link for 'Forgot my password' is positioned below the password field. A 'Login' button is located below the forgot password link. At the bottom of the main content area, there is another large placeholder and a link that reads 'Not a member yet ? Sign up for free'.

Figure 1 Login page

Figure 2 shows the login screen for the user. To login into the system, user is required to enter their username and password followed by clicking the “Login” button to login.

- **Sign Up page**

The image is a wireframe of a web page for signing up. It is enclosed in a browser window frame. The top navigation bar contains a logo placeholder (a rectangle with an 'X'), four menu items: 'Catalog', 'Resource', 'Community', and 'Pricing', a search icon, and a 'Log In' button. The main body of the page has a large placeholder image at the top center. Below it is the text 'Get started for free'. This is followed by two input fields: one labeled 'Email' and another labeled 'Password'. Below the password field is a 'Sign Up' button. At the bottom of the main content area, there is another large placeholder image and a link that reads 'Already have an account ? Log In'.

Figure 2 Sign up page

Figure 3 shows the sign-up screen for the user to register their account. There are a few of details that user in to fill in before sign up their account for example name, email, password, and role. Other profile information can be edit once their account has been created.

- **Main page**

The wireframe illustrates a main page layout with the following sections:

- Header:** Contains a navigation bar with links for Catalog, Resource, Community, and Pricing, a search icon, and a Login button.
- Hero Section:** Features a large placeholder image on the left and a registration form on the right. The form includes a text input for "Lorem ipsum", fields for Email and Password, a Sign Up button, and a placeholder for a social media link.
- Course Section:** Displays a "Start Learning Popular Course" header, a placeholder for a course description, and a row of four placeholder images for course thumbnails. Below the thumbnails is an "Explore full catalog" button.
- Community Stories Section:** Includes a "Community Stories" header, a line of placeholder text, and three placeholder images for community member profiles.

Community Stories

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Start For Free !

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Start For Free !

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Sign Up

Footer

Figure 3 Main page

- **Catalog page**

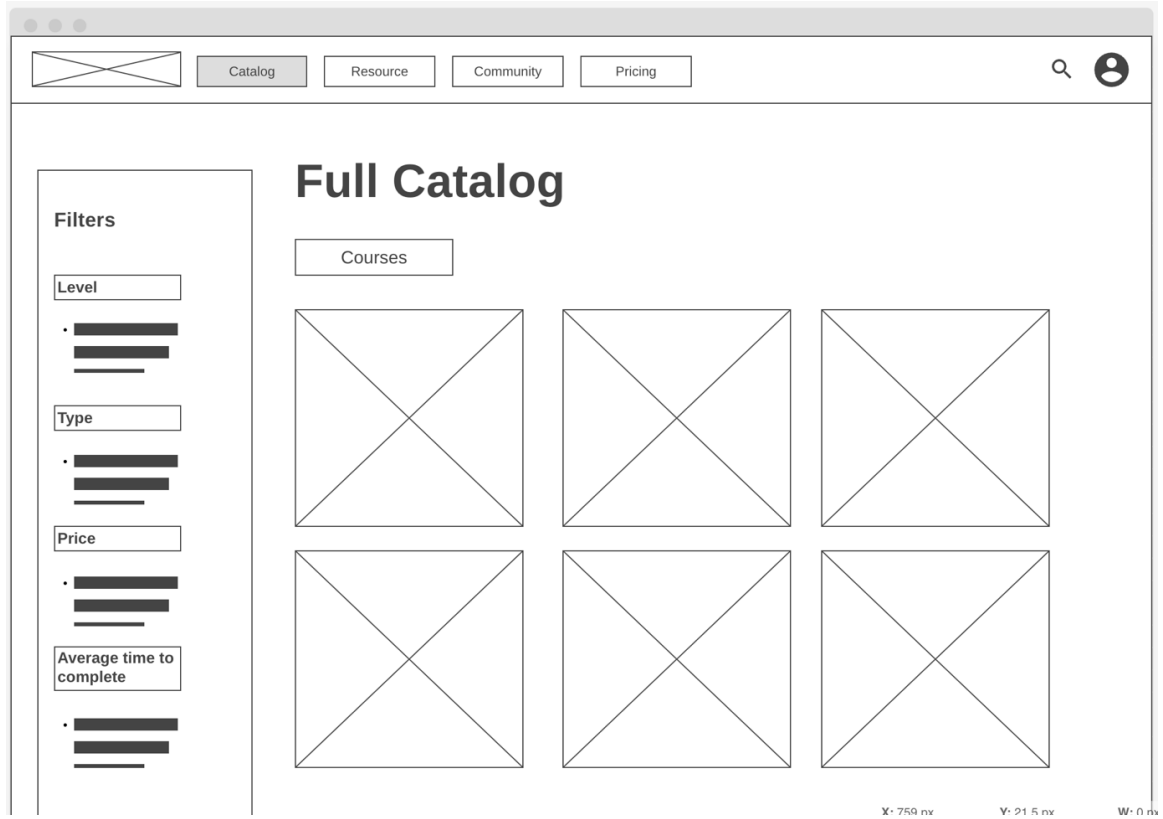


Figure 4 Catalog Page

- **Student user dashboard page**

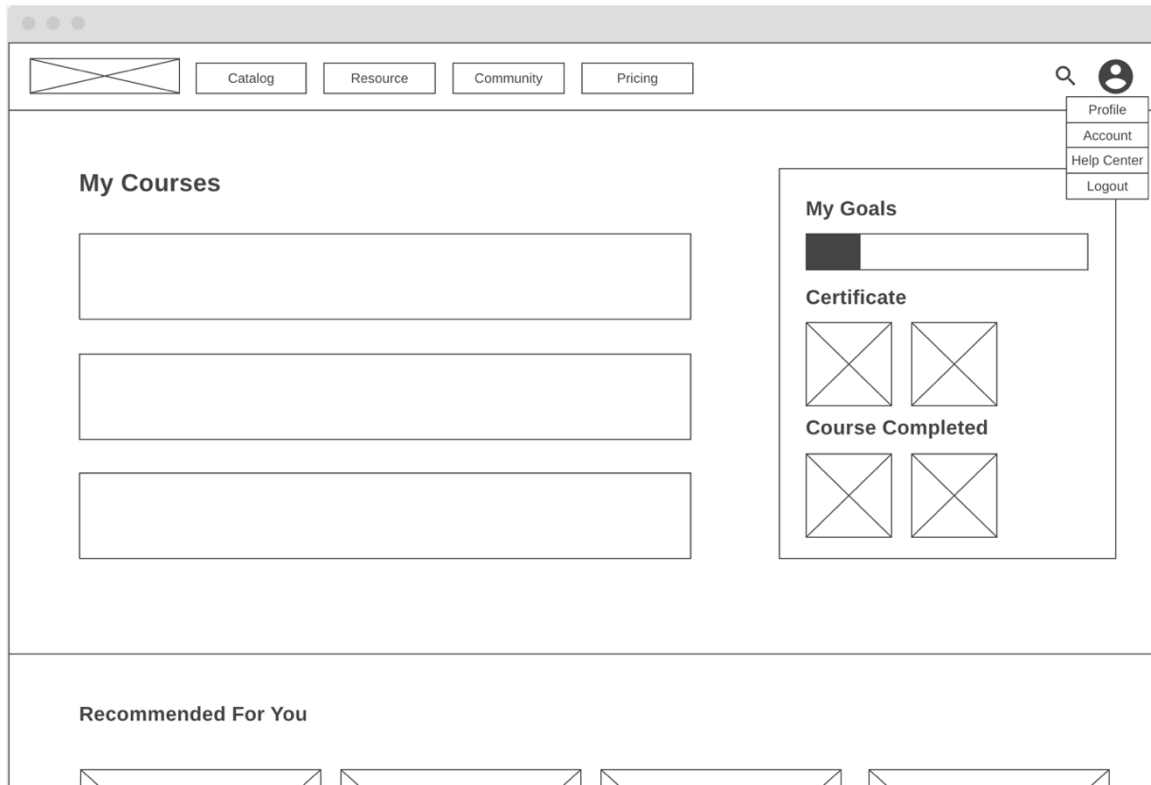


Figure 5 Student User Dashboard

- **Course Page**



Catalog

Resource



COURSE TITLE

Lorem ipsum dolor sit amet et delectus
accommodare his consul copiosae legendos at
vix ad putent delectus delicata usu. Vedit
dissentiet eos cu eum an brute copiosae

START

SKILL LEVEL
Lorem ipsum

TIME TO COMPLETE
Lorem ipsum

CERTIFICATE OF COMPLETION
Lorem ipsum

About this course
Lorem ipsum dolor sit amet et delectus
accommodare his consul copiosae legendos at
vix ad putent delectus

Skills you'll gain
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Module 1
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Module 2
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Module 3
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Module 4
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Figure 6 Course page

- **Content page**



Figure 7 Content page

- **Tutor dashboard page**

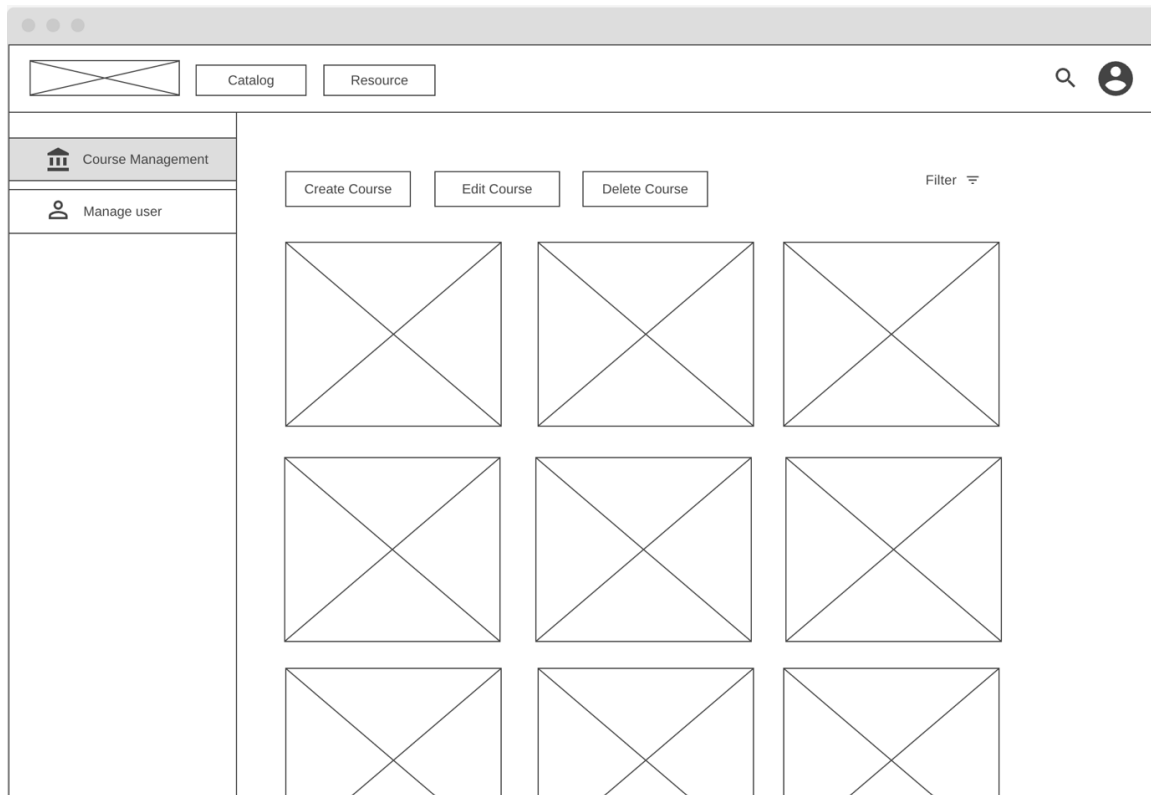


Figure 8 Tutor dashboard page

- **Create course page**

Catalog

Resource

🔍

👤

Course Management

Manage user

Back

Create Course

Next

Course Title

Description

Duration

Languages

Course Level

Catalog

Resource

🔍

👤

Course Management

Manage user

Go to Create

Course Content

Publish

Add Module +

Module name

Lesson 1

description

Attachment

Save

Module name

Lesson 1

description

Attachment

Save

4. Functional and non-functional Requirements

4.1 Overview

The functional requirements will cover the required features of the software product, such as student to view and enroll their courses and tutor to create, update and delete their category, courses and chapter learning content.

The non-functional requirements will include information about the system's performance and reliability goals, such as response time, availability, and scalability. It may also include information about usability, security, and regulatory requirements. These requirements will be presented in a clear and detailed manner, providing information about the desired performance characteristics of the system, such as the maximum response time and the acceptable error rate. It will also include the software attributes like compatibility, maintainability, and portability.

Overall, this will provide a detailed and comprehensive description of the requirements for the SkillSpark Online Learning Platform, including both functional and non-functional requirements. This will provide a clear and detailed understanding of the requirements for the system, which will help to ensure that the system is built correctly the first time, reducing the need for costly and time-consuming revisions and testing.

4.2 Functional specifications:

Student Role:

- View all categories and courses: Students can browse through a list of categories and courses available on the platform.
- Enroll in courses: Students can enroll in courses of their choice.
- View course content: Students can access video content associated with enrolled courses.
- Login: Students can log in to their accounts using their credentials.
- Sign up: New users can create accounts to access the platform.
- Edit profile: Students can update their profile information, such as name, email, and password.

Tutor Role:

- Create, edit, delete categories: Tutors can manage categories by creating, editing, or deleting them as needed.
- Create, edit, delete courses: Tutors have the ability to create, edit, or delete courses within their assigned categories.
- Create, edit, delete chapters and chapter content: Tutors can structure courses by creating, editing, or deleting chapters and their content.

- Upload video learning content: Tutors can upload video content for chapters within their courses.
- View enrolled students: Tutors can see a list of students enrolled in their courses.
- Remove enrolled students: Tutors can remove students from their courses if necessary.
- Edit profile: Tutors can update their profile information, including name, email, and password.

5.3 Non-functional specifications:

Performance:

- Response Time: The platform should have fast response times, with pages loading within a few seconds to ensure a seamless user experience.
- Scalability: The system should be scalable to accommodate a growing number of users and courses without compromising performance.

Security:

- User Authentication: Secure authentication mechanisms should be implemented to ensure the confidentiality and integrity of user accounts.
- Data Encryption: Sensitive user data, such as passwords, should be encrypted to prevent unauthorized access.
- Secure File Upload: Tutors should be able to upload video content securely to prevent the upload of malicious files.

Reliability:

- Availability: The platform should be available 24/7, with minimal downtime for maintenance or updates.
- Error Handling: The system should gracefully handle errors and provide informative error messages to users when issues arise.

Usability:

- Accessibility: The platform should be accessible to users with disabilities, following accessibility standards such as WCAG (Web Content Accessibility Guidelines).
- User Interface Design: The user interface should be intuitive and easy to navigate, with clear navigation paths and consistent design elements.

6. Specific Requirements

6.1 Entity Relationship Diagram

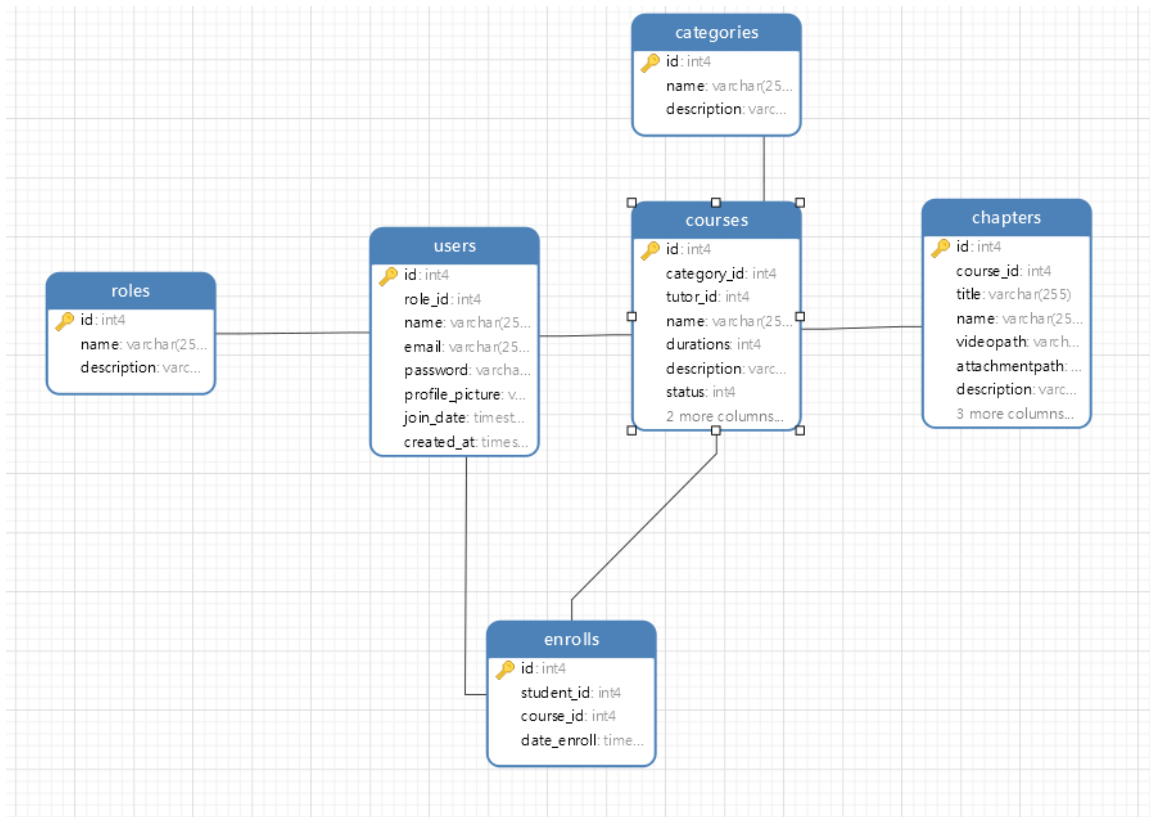


Figure 9 ERD Design

7. References

Appendix A: Gantt Chart

	15/3	20/3	21/3	25/4	31/4	1/4
Planning						
Analysis Software Requirement						
Design Process						
Development						
Testing						
Deployment						
Review						
Documentation						