**CodeX Learner**

**Specification Document**

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**Team name: Git Guardians**

This Document is far from complete and iterations are being made every minute, keeping in mind the team’s capabilities and the time limit

**Overview**

**CodeX Learner** is a web application created for user of any age and background to get started on the journey of programming from the very basics.

But it won’t just be for beginners, users of any level can learn their desired course from this platform, they can watch embedded YouTube videos, and AI generated simplified content with examples for better understanding and an integrated Code editor to test their skills as they learn.

Examples of a few courses are Introduction to computer science , basics of C , Basics of Python.

**Requirement analysis**

**Where and how to start?**

There are many people who have an interest in coding but cannot find a place to start. People who already have a career in another field but decide to take an interest in Programming. But they do not know how to get started.

We want to build an e learning web app that can provide learners a way to start from the beginner level and follow a roadmap to go from beginner to pro in whatever they want to learn about programming.

**Big patch of text;**

If the user is anyone like the author of this document it is certain he has the attention span of a 3 year old. It is impossible to go through a paragraph and understand more than two words.

Short and simple AI generated content is the way we solve this problem.

**Page 1:**

The First thing a user will see when they open CodeX Learner will be a login page, which also has a Register button.

**{NON GOALS}**

The user will only need to sign up or login to continue and save their progress.

Since we are not acquiring any personal data like Name, Phone number etc. any user can use the platform without signing up, or logging in.

We have no idea how we are going to provide security to users and we have no intentions of implementing any sort of security anytime soon .

Forgot Password?

If the user forgets their password we will simply use send them a reset form their email.

**Page 2:**

Next Page which is also the Homepage will have Things;

A dashboard of the user’s current progress of courses and quizzes so they may continue any course

-If the user did not Login this will just be a panel of the courses available

The dashboard will also have two buttons to allow users to continue reading their course content or attempt Quizzes related to the most recent chapter they completed.

A Search Button to search for a specific course (location of a button will be decided later)

**Code Editor**

-Students can use an inbuilt code editor to practice code right next to the content

-Syntax highlighting in the code editor

-Code Auto completion, suggesting keywords, functions, and variables as the user types

-Code Folding: Allow users to collapse and expand sections of their code for better organization.

-event listeners to capture user interactions such as saving code.

-Students can attempt problems of Levels: easy, medium, hard.

-Students can track their progress using a Progress bar for each course

-Real-time coding exercises and assignments

-Students can search a course and enroll

-Students Dashboard to manage all the enrolled courses

-A dashboard for upcoming courses and when they are expected to be available

- Favourite column for students to save the courses for future learning.

-Integrate Categorised and personalised content from open sources websites.

-Get permission from the creator and embed YouTube videos, the right video for the right topic.

-Add Captions and transcripts for videos

-Course divided into multiple Chapters and sections.

-Multiple Choice and Coding Tests at end of every Chapter.

-Integrate Leetcode And Hackerrank Problems

**Roadmaps**

  -Comprehensive roadmaps using flowcharts to go from beginner to pro

**# Stakeholder**

1.  Students:

• Primary users who will use the application to access courses, quizzes, assignments.

2.  Administrators:

• Responsible for managing the overall system, user accounts, and ensuring its smooth functioning.

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**## Project Data:**

Creating a project database for a web or mobile application that provides online courses, quizzes, assignments, and feedback involves designing a suitable database schema to store relevant data.

Entities and Attributes:

1.  Users:

• UserID

• First Name

• Last Name

• Email

• Password

2.  Courses:

• CourseID

• Title

• Description

**## Ai used - Chat GPT**

    Prompts used: what can a user who is a beginner in coding expect from an e learner web application ?

    :supose you are a team manager of a team of 6 member working on creating an e learning platform , assign roles responsibilites to each member.

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