**CodeX Learner**

**Specification Document**

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**Last updated: September 19, 2023.**

**Team name: Git Guardians**

Note\* This Document is far from complete and iterations are being made on a daily basis, keeping in mind the team’s capabilities and the time limit.

**Overview**

**CodeX Learner** is a programming focussed e-learning platform 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 read 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 Python and Basics of C.

**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 advance 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 lines without reading it at least 5 times.

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

**Functional Specifications**

**Page 1(Login Page)**

The First thing a user will see when they open CodeX Learner will be a login page

It will have the following fields to be filled by user:

Email

Password

A (remember me) Checkbox to save user info to the browser

And the following buttons:

Login

Register

Forgot password

Home

About

Service

Contact

**{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, Gender etc. any user can use the platform without signing up, or logging in.

Forgot Password?

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

After the first few iterations of the spec were done our fronted dev already started working on creating a possible Login page (open to variations).



**Page 2(Homepage)**

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).

-The search button will just filter out the courses according to keywords typed by user and show the results on homepage itself

**Page 3(Content Page)**

This is the on-click event page for when the user clicks on a course

This will be an interactive page with:

Details about the chapters

Content of each chapter

Quiz at the end of each chapter

A code editor

**Code Editor**

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

-API running on the backend server, which will take a piece of code and language as input and output the answer after running the code on the server

-Frontend code editor, we can choose the language and edit and modify the code here. Then we make a post request to the backend API and show output on the web Application.

-A Top Panel will consist of brief details about the course and a progress bar

-Embed videos from various sources on YouTube (after taking permission from owner).

-Integrate Categorised and personalised content taken from several 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.

-Integrate problems similar to one’s found in Leetcode and Hackerrank.

**Future Scope;**

Another interface for instructors

Who will be the instructors: YouTube Content Creators

We have seen that many teachers on YouTube use the comment section or the description to put in some notes or questions they have for their viewers.

We would like YouTube content creators to add their course content on our platform along with notes and quizzes for their viewers so that users can stick to a teacher of their choice and follow their entire course.

**## Ai used - Chat GPT**

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

**## Key Members**:

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