

# **SYNOPSIS**

**Report on**

**UpAlgo**

**by**

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# ABSTRACT

UpAlgo is an innovative online platform tailored to the needs of coding enthusiasts, providing an invaluable resource to enhance your coding skills and excel in algorithmic problem-solving. Much like having a personal mentor by your side, UpAlgo offers a diverse selection of coding challenges suitable for individuals at every skill level, from beginners to advanced coders. With an intuitive and interactive coding environment, you can write, test, and run Python code seamlessly, fostering a supportive space for honing your coding prowess.

Simplicity and convenience define the UpAlgo experience, as you can effortlessly log in using GitHub account, ensuring a hassle-free start to your coding journey. Your progress is meticulously tracked, allowing you to monitor your accomplishments, track solved questions, and witness your coding skills evolve over time.

For those seeking an extra challenge, UpAlgo presents premium content that delves into more intricate coding concepts. Access to this exclusive content is conveniently facilitated through the secure Stripe payment gateway. Whether you're gearing up for a job interview or simply striving to become a more proficient coder, UpAlgo is your steadfast companion, empowering you to code your way to success. Join our community today and embark on a journey of coding excellence!

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# 1. INTRODUCTION

Greetings! UpAlgo is your dedicated platform for learning and mastering coding in a structured and friendly environment. Whether you're taking your first steps into the world of coding or preparing for career-defining technical interviews, UpAlgo is here to guide you on your journey.

Our platform offers a wide range of coding challenges suited for beginners and seasoned coders alike. With UpAlgo, you have the opportunity to write, test, and refine your Python code right here on our platform, making learning an enjoyable experience.

Getting started is a breeze - simply log in with ease using your GitHub credentials. We prioritize your security and data privacy at every step.

As you progress, UpAlgo helps you track your achievements. You can monitor your solved questions, gauge your improvement over time, and challenge yourself further with our premium content. Access to these advanced coding challenges is made secure and straightforward through the Stripe payment gateway.

Whether you're aiming for career advancement or simply want to expand your coding skills, UpAlgo is your trusted companion. Join our community today, and embark on your coding journey with confidence!

## **2. LITERATURE REVIEW**

In the process of developing UpAlgo, we conducted a thorough review of existing literature and related projects in the field of online coding preparation platforms. Our goal was to learn from established platforms and incorporate best practices into the Our literature review that confirmed that a user-friendly interface, comprehensive coding challenges, secure authentication, and effective payment processing are crucial elements for the success of an online coding preparation platform like UpAlgo. These insights from established platforms informed our project's development and strategy, ensuring that UpAlgo would offer a valuable and user-centric experience for learners and coding enthusiasts.

### **3. PROJECT OBJECTIVE**

Our main goal with UpAlgo is to help people become better at coding. We want to make learning to code easier and more enjoyable, whether you're just starting or have some experience.

Here's what we're aiming for:

1. Lots of Practice: We're providing a bunch of coding challenges, so you can practice coding and get really good at it.
2. Safe Practice Space: You can write and test your Python code right on our website. It's like having a playground for coding.
3. Easy Start: Getting going is super simple. You can log in with your email or GitHub account. No fuss!
4. Track Your Progress: We'll help you see how you're doing. You can keep an eye on the questions you've solved and how you're getting better over time.
5. Extra Challenges: If you're up for it, we have some extra special coding puzzles. You can unlock them with a secure payment through Stripe.

## 4. PROJECT OUTCOME

With UpAlgo, we aim to deliver a platform that empowers individuals to excel in coding and algorithmic problem-solving. Here's what you can expect as the project outcome:







1. **Improved Coding Skills** Users will have the opportunity to enhance their coding skills through hands-on practice with a diverse range of coding challenges.
2. **Accessible Learning:** UpAlgo will provide a safe and user-friendly coding environment, making it easy for learners of all levels to write, test, and improve their Python code.
3. **Convenient Access:** Logging in will be hassle-free, with options to use your email or GitHub account.
4. **Progress Tracking:** Users will be able to monitor their progress, keep track of questions they've solved, and see how they're improving over time.
5. **Premium Content:** For those seeking advanced challenges, UpAlgo will offer premium content accessible through secure payments via Stripe.

The project outcome is designed to empower users to become more proficient coders, prepare for technical interviews, and ultimately achieve their coding goals. UpAlgo is here to support your coding journey, making it engaging, educational, and rewarding.

The technical document that is provided in the synopsis of this project will help developers understand the internal workings of the system.



## 5. Proposed Time Duration

ID	Name	Sep, 2023			Oct, 2023				Nov, 2023		
		11 Sep	17 Sep	24 Sep	01 Oct	08 Oct	15 Oct	22 Oct	29 Oct	05 Nov	12 Nov
1	Feasibility study										
2	Requirement Analysis										
3	Designing										
4	Coding										
5	Testing										
6	Report Writing										

**Feasibility Study:** we have decided 1 day for feasibility study and requirement gathering so that we can analyze our capabilities and resources.

**Analysis:** For 3 days, we proposed ourselves for esteem analysis of software requirements and risk and resource management.

**Designing:** In this phase (1 week) we will focus on designing the blueprint of software and try to focus on the coding part also.

**Coding:** From week 3 to week 5, we focus on the coding part and try to follow pre-developed prototype of software.

**Testing:** Testing is not a part of only testing phase hence testing will be applied through each and every phase of software development life cycle.

**Report Writing:** During the process of developing a project (software) we will constantly write reports on current projects.

**Hence the total time required to develop this project is around 7 weeks.**

## **REFERENCES**

1. [LeetCode](<https://leetcode.com/>): LeetCode offers coding challenges and a user-friendly coding environment.
2. [HackerRank](<https://www.hackerrank.com/>): HackerRank provides coding challenges and interview preparation kits.
3. [GitHub OAuth Documentation] -  
<https://docs.github.com/en/developers/apps/building-oauth-apps>): Learn how to implement secure user authentication with GitHub OAuth.
4. Stripe Documentation (<https://stripe.com/docs>): Explore Stripe's documentation for payment processing integration.
5. Django Documentation (<https://docs.djangoproject.com/en/stable/>): The official Django documentation for building the backend of your platform.
6. Codecademy (<https://www.codecademy.com/>): Codecademy offers interactive coding courses and a reference for user-friendly coding environments.
7. Coursera (<https://www.coursera.org/>): Coursera provides online courses, some including coding assignments and progress tracking.
9. Stripe's Python Library (GitHub Repository) (<https://github.com/stripe/stripe-python>): Explore the official Stripe Python library on GitHub for payment processing in Python.

## Books

1. "Django for Beginners" by William S. Vincent](<https://www.amazon.com/Django-Beginners-William-S-Vincent/dp/198317266X>)
2. "Python Crash Course" by Eric Matthes](<https://www.amazon.com/Python-Crash-Course-2nd-Edition/dp/1593279280>)
3. "Clean Code: A Handbook of Agile Software Craftsmanship" by Robert C. Martin](<https://www.amazon.com/Clean-Code-Handbook-Software-Craftsmanship/dp/0132350882>)
4. "The Pragmatic Programmer: Your Journey to Mastery" by Andrew Hunt and David Thomas](<https://www.amazon.com/Pragmatic-Programmer-Journeyman-Master/dp/020161622X>)
5. "Designing Interfaces: Patterns for Effective Interaction Design" by Jenifer Tidwell](<https://www.amazon.com/Designing-Interfaces-Patterns-Effective-Interaction/dp/1449379702>)
6. "The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses" by Eric Ries](<https://www.amazon.com/Lean-Startup-Entrepreneurs-Continuous-Innovation/dp/0307887898>)
7. "The UX Book: Agile UX Design for a Quality User Experience" by Rex Hartson and Pardha S. Pyla (<https://www.amazon.com/UX-Book-Process-Techniques-Experience/dp/0123852412>)
8. "JavaScript: The Definitive Guide" by David Flanagan (<https://www.amazon.com/JavaScript-Definitive-Most-Used-Programming-Language/dp/1491952024>)
9. "Introduction to the Theory of Computation" by Michael Sipser (<https://www.amazon.com/Introduction-Theory-Computation-Michael-Sipser/dp/0357313792>)
10. "Continuous Delivery: Reliable Software Releases through Build, Test, and Deployment Automation" by Jez Humble and David Farley (<https://www.amazon.com/Continuous-Delivery-Deployment-Automation-Addison-Wesley/dp/0321601912>)

