Go Daddy Web Build-A-Thon

CPguide

Education Domain

Category – GoDaddy

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INTRODUCTION

Overview

The project CPguide (Competitive Programming guide) has been developed on Wordpress which will guide the students who wish to dive in the deep ocean of Competitive Programming but don't know how to start and what should be the roadmap for CP.

Every culture has competitions; why not make good use of the competitive spirit for education? Sure, competitive programming only covers a small subset of CS and there are a lot of aspects to society that are more important than programming, but it's clear that the world is becoming increasingly dependent on technology. Competitive programming can help societies make that transition.The website contains everything you need to become a real competitive programmer.

The website provides a perfect roadmap for competitive programming like where to start from if you are a beginner in CP, what are the topics to be covered and where to practice them, the website provides link to different websites from where user can learn more about a specific topic. The website gives information about various online platforms where you can test your knowledge and compete with others by participating in various contests. Apart from all these, user can also go through the various reference materials which are most recommended for CP and their key points, link to buy them is also available for purchasing any of those reference books.

Purpose

- To develop a one stop platform providing complete roadmap of Competitive Programming.
- To provide all information and materials related to Competitive Programming.
- To make users more comfortable with Competitive Programming.

Literature Survey

Existing Problem:

There isn’t any such platform which is solely dedicated to competitive programming. Therefore many students find it difficult and hesitate to start competitive programming because they didn’t have proper guidance. Students had to visit different websites for various queries, even then sometimes one had to return empty handed.

There are many websites like Geeks for Geeks, Tutorials Point and many more but none of them provide a complete roadmap for CP.

There was no website that provided information for various online coding competitions that are organized on different platforms like CodeChef, Codeforces and many more.

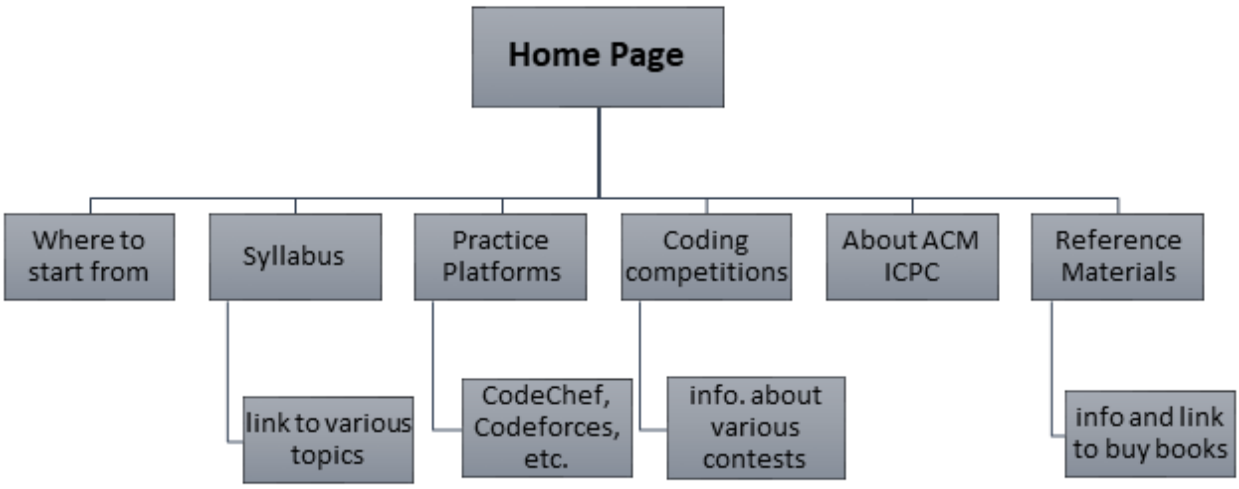
Proposed Solution:

I created a website that showed everything related to Competitive Programming in one place including all information about various online coding competitions, topics to be covered to master CP, link to various practice platforms where one can do self-assessment.

The website also include a FAQ section to answer all queries related to CP. So students do not have to go to different platforms, everything they need to start CP is available on a single platform.

Theoretical Analysis

Block diagram:



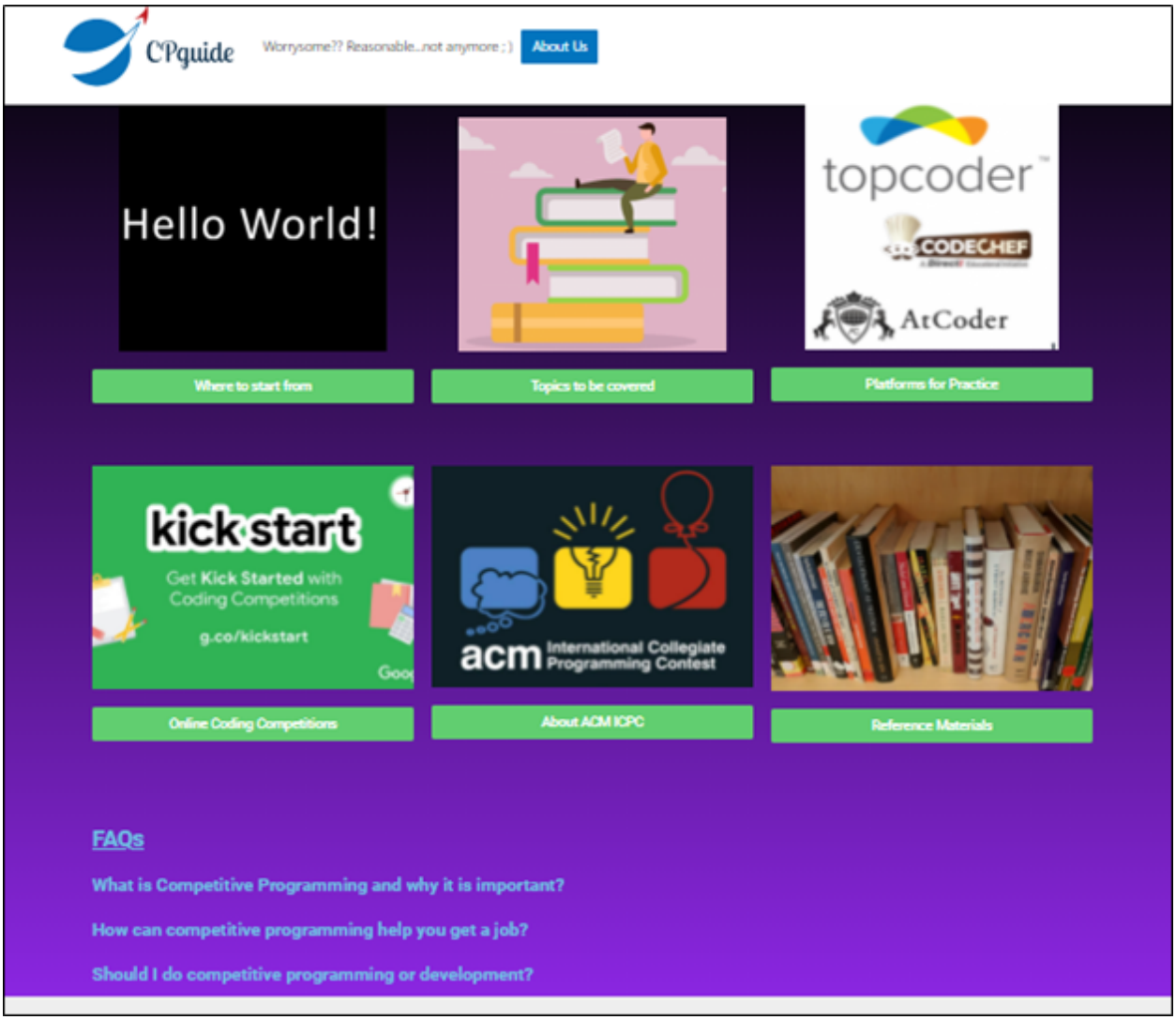
Hardware and Software requirements:

- Disk Space: 1GB+
- Web Server: Apache or Nginx.
- Database: MySQL version 5.0. 15 or greater or any version of MariaDB.
- RAM: 512MB+
- PHP: Version 7.3 or greater.

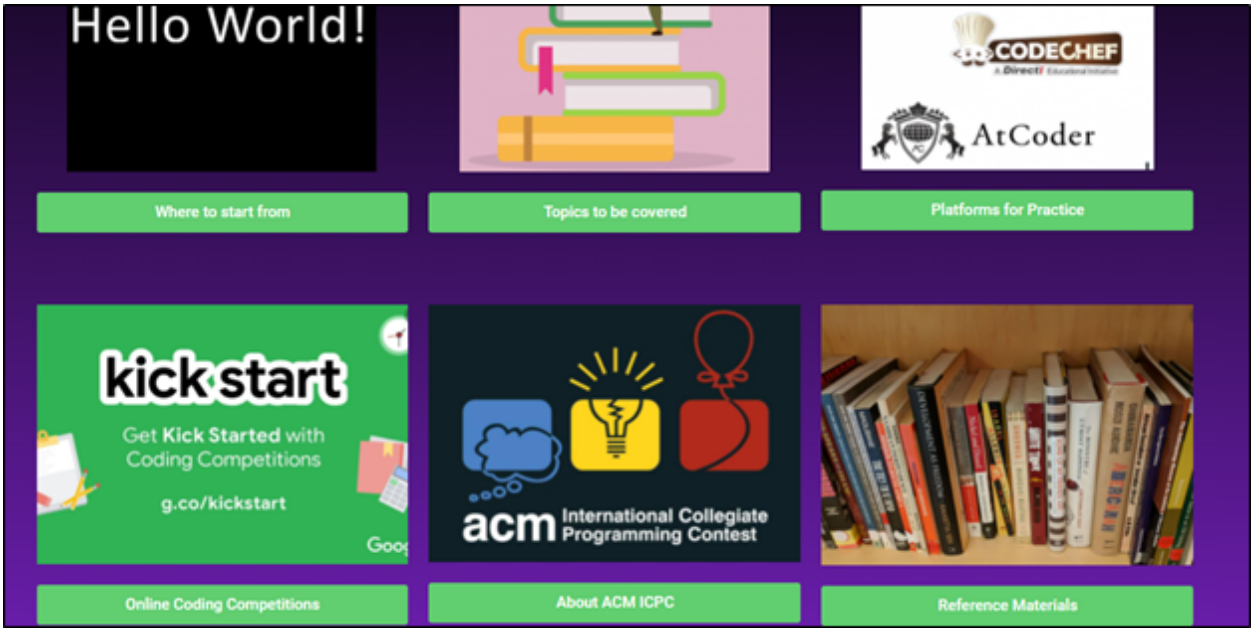
Processor: 1.0GHz+

Result

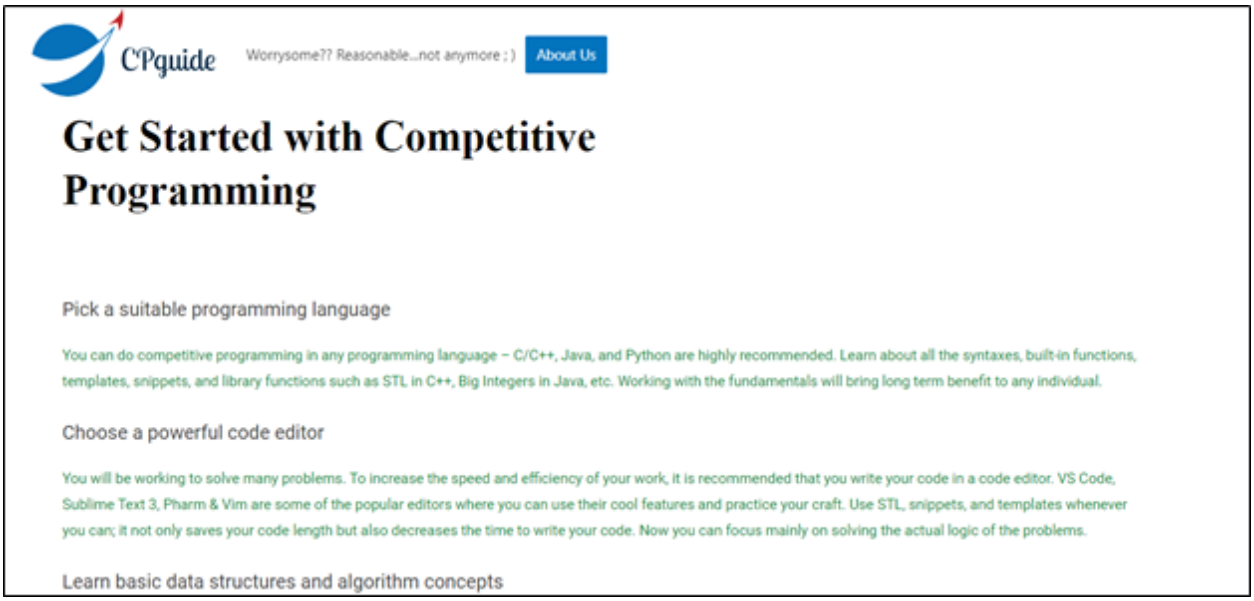
1. Home Page:



2. Various options:

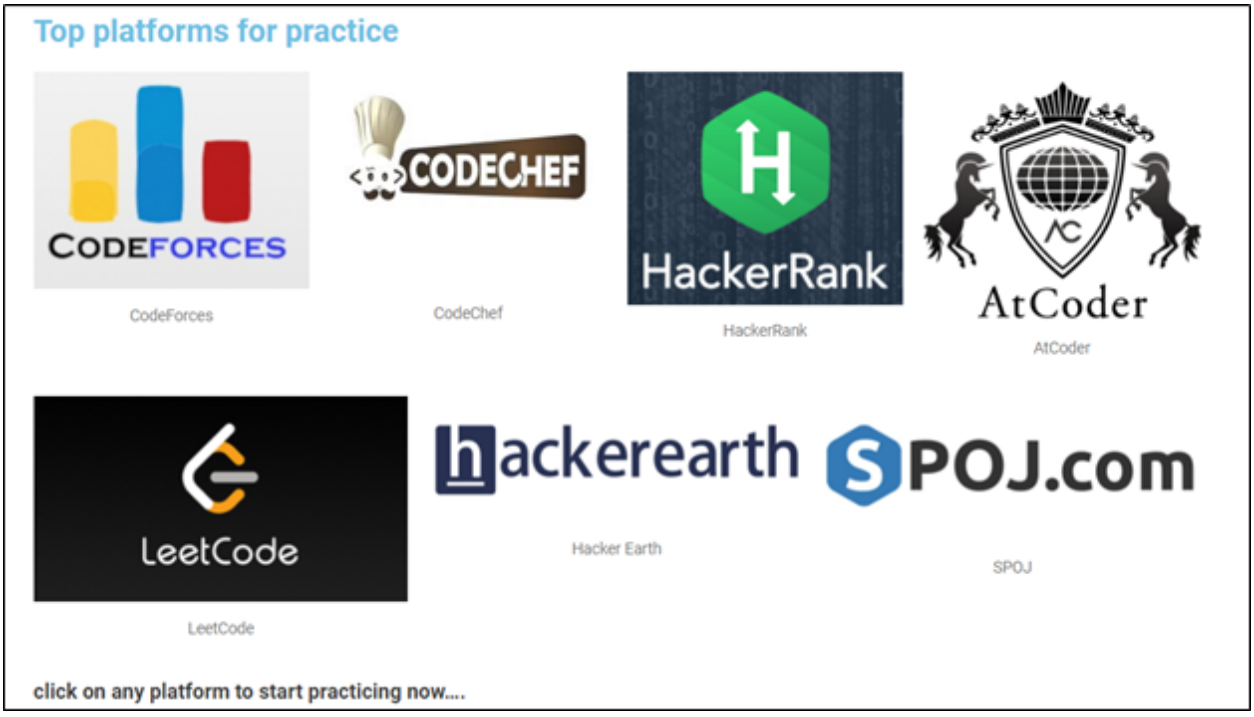


3. “Where to start from” page:

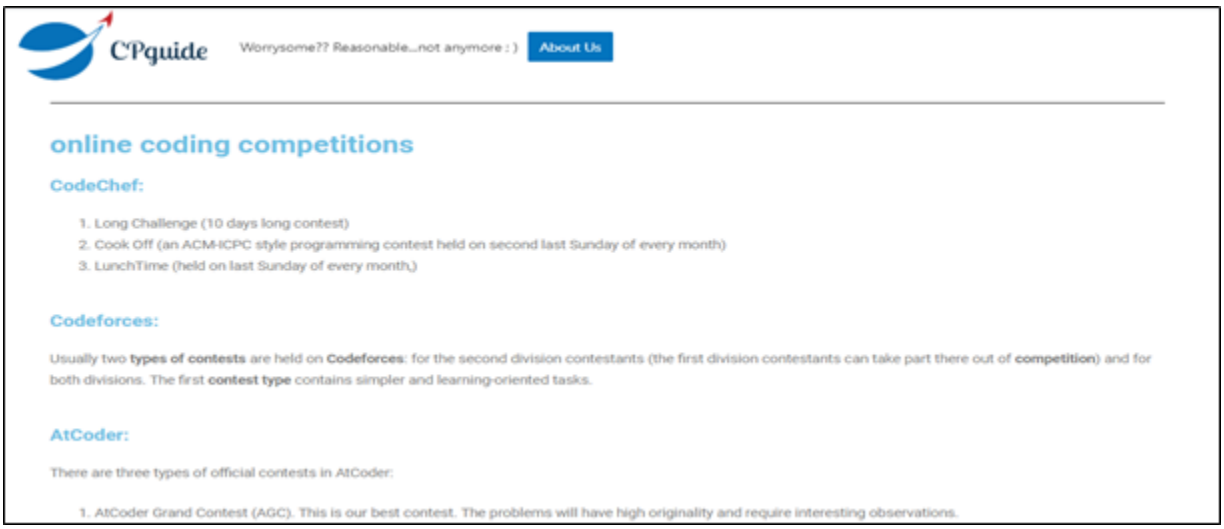


4. list of all topics related to CP with link:

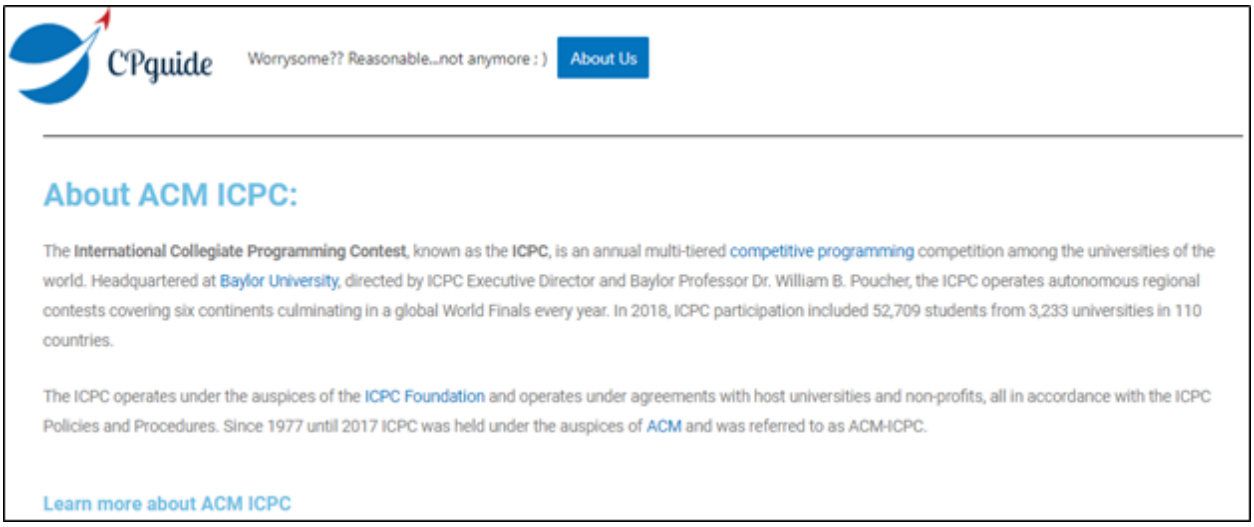
5. Practice platforms user can visit just by clicking on the logo of that website:



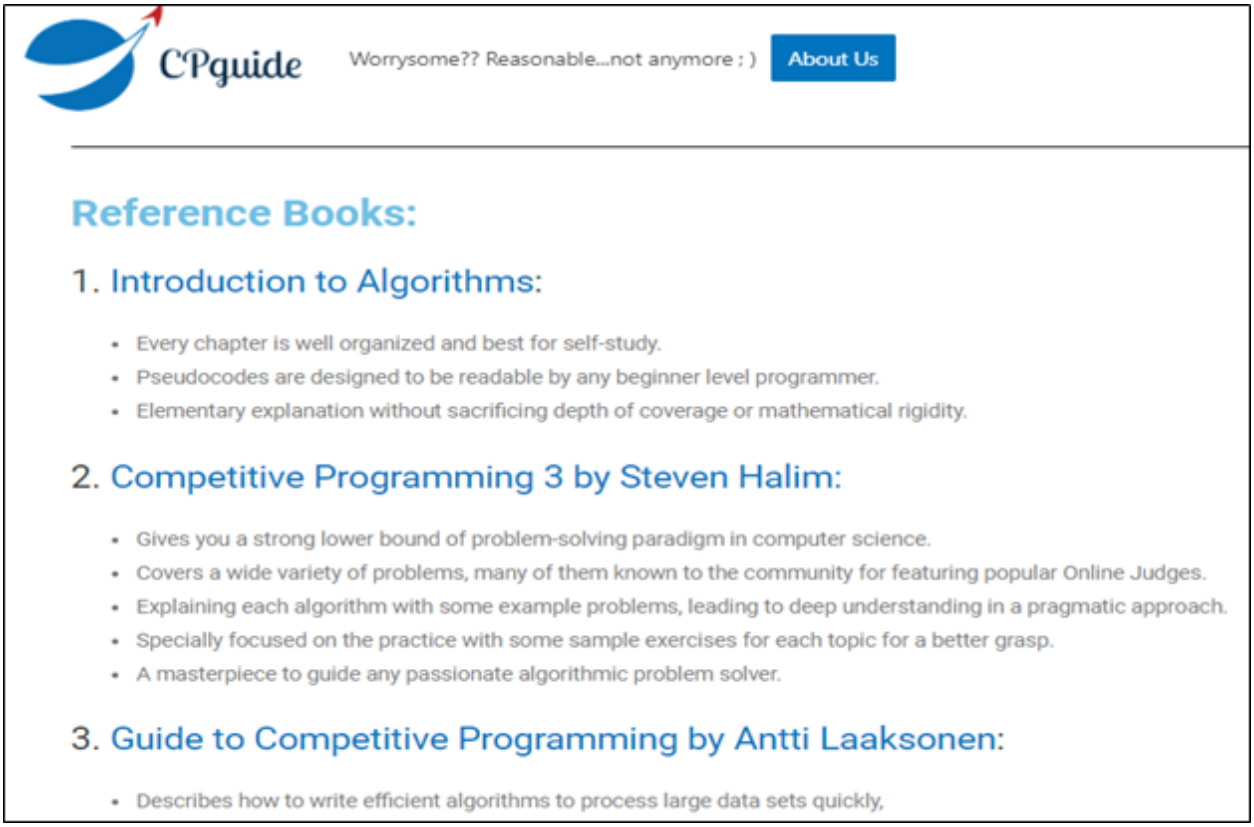
6. List of various coding contests:



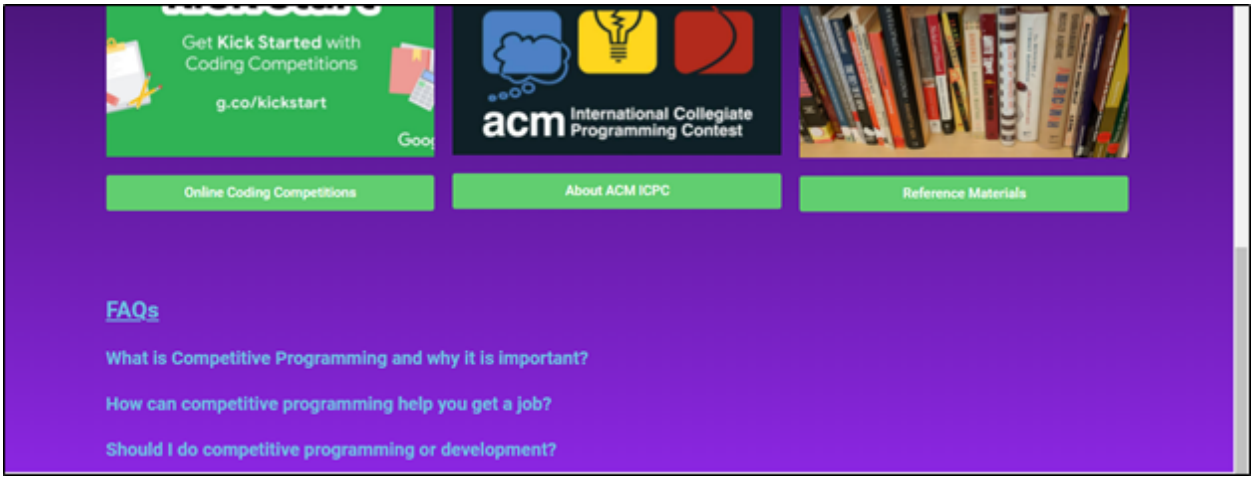
7. About one of the most prestigious coding events “ACM ICPC”:



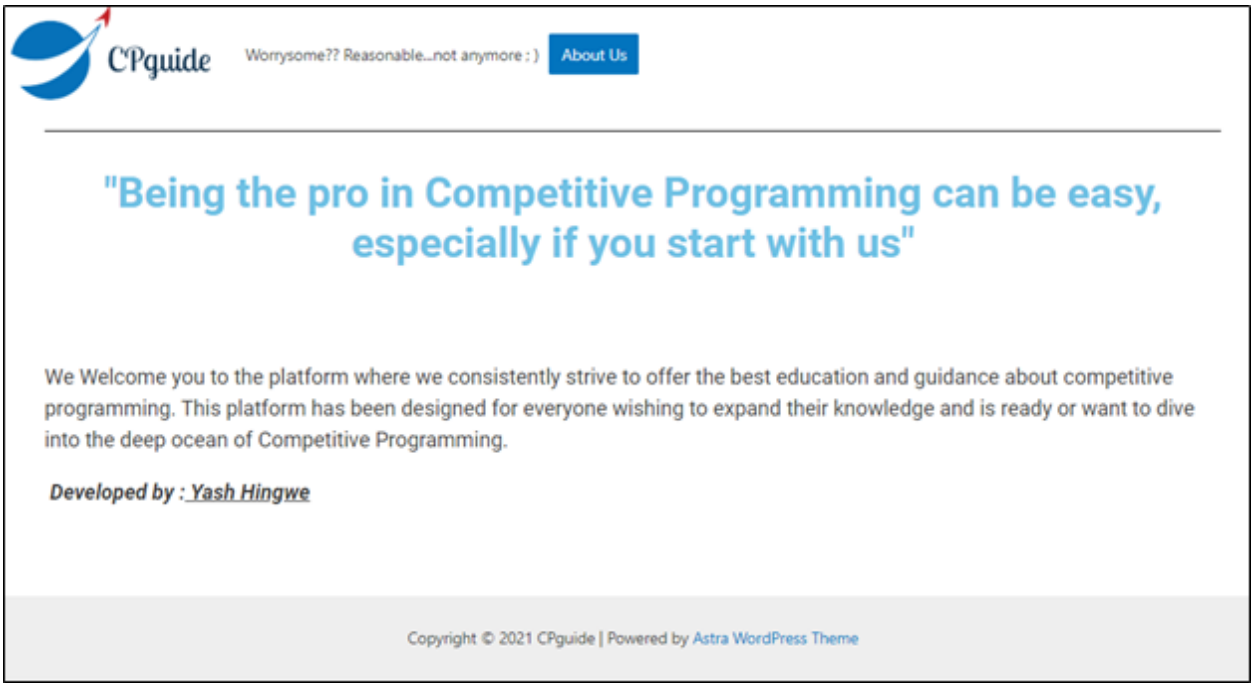
8. List of best reference books with links to buy them:



9. FAQ section:



10. About Us page:



Home Page can be revisited by clicking on the site's logo…

Advantages:

- Extremely helpful for the beginners in Competitive Programming.
- Everything related to competitive Programming is available on a single platform, so user's time will be saved.
- Students often get frustrated when they do not know about what should be their next step, the website provides complete step by step roadmap for Competitive Programming.
- Competitive programming helps sharpen your brain for programming and people at the top of the competitive programming domain are really smart. Also, some of their exceptional qualities like their maths and coding skills might be overkill for some SDE jobs.
- Provides information about major online coding competitions.
- User friendly interface.

Disadvantages:

- Sometimes it is good to go through the bushes and face some difficulties in the process of learning something new, but with the help of CPguide you don't have to visit different sites and you can find everything at one place. So, sometimes it can keep you away from learning something new.

Applications

The solution can be applied in computer engineering area. The website is mainly designed and developed for Competitive Programmers and for those who want to learn Competitive Programming.

User can master the concepts of Competitive Programming using CPguide which will help them in many aspects like, it makes you a desirable candidate to major companies and helps you solve complicated problems.

Conclusion and Future Plans

Future Plan:

- Adding more graphics and making the website more attractive.
- Add discussion forum.
- Link an online compiler for languages like c++, java, python, etc.
- Adding an online open course for Competitive Programming.

Conclusion:

After having long study on Competitive Programming, we can conclude that Competitive programming helps sharpen your brain for programming and people at the top of the competitive programming domain are really smart. Competitive Programming is like a brain training app, but for real skills. By practicing to solve problems regularly, programmers can ensure that the coding part of their brain receives a regular workout. Solving challenging problems in a fast-paced environment is definitely a great exercise to boost gray cells. Even if coders end up in a job that doesn't necessarily require the skills competitive coding provides, practicing competitive programming on the side is a great way to constantly challenge their thinking skills and exercising those gray cells.

Competitive Programing has a great future but it is necessary to spread awareness about its benefits.

Bibliography

https://www.geeksforgeeks.org/

https://www.w3schools.com/

https://en.wikipedia.org/wiki/Wikipedia

https://www.codechef.com/

https://codeforces.com/