



## A Survey on Employability Test Portal

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### ABSTRACT—

Placements are the biggest part of the final year student's life and most of the students are not well prepared in order to face the tests of the companies. Even though we have a lot of platform to learn from, students are not properly trained in this field. This has increased the need for a platform which will facilitate not only the preparation of students in Programming as well as other major factors of placements like Aptitude and Computer Fundamentals. This project that we aim to develop solves this particular issue and will also enhance the skills of the students by continuous feedback learning. The purpose of this work is to prepare a platform which will help the students of the final year in preparation for the placements in subjects like Aptitude, Operating Systems, Database Management System and Coding. It focuses on preparing students for the tests that are conducted during the placements by different companies. The end-product will be a web application which the students can use to practise and appear for the tests in Coding, Aptitude, Operating Systems and Database Management System sections. This kind of platform has to have very strong backend as well as an attractive and simple to handle frontend. The application will be developed using: React in the Front-end, Django for the Backend and Rest Api for the connectivity between the backend and the frontend. The data will be transferred in the form of a JSON contract for easy interpretation. The web application will be composed of REST API endpoints for performing various operations. Some of the features that will be provided by the application are Practise section for students to practise questions, Test Section where students can solve different tests, Report generation which will give feedback to student to see the mistakes made by him/her in tests, Dashboard in order to see the profile for the student, support of languages like JavaScript, Java, C++, C and Python for coding, 13 different types of questions in the Aptitude Section. Thus, this project will solve the critical need of the students preparing for the placements in their respective colleges.

Keywords - Programming, Computer Fundamentals, Aptitude, Operating Systems, Database Management System, React, Django, REST

### INTRODUCTION

Starting placements studies raises many questions in students' thoughts, such as how much to learn and from whom, as well as which resources to use as there are many courses and teachers available on platforms like Youtube and Udemy. There are other online resources as well, but they do not offer pupils comprehensive assistance in the areas of aptitude, coding, and computer fundamentals. Many students simply waste a lot of time making these judgments and switching between resources as a result of the uncertainty. When you know what to study and how to study, placement studies are not difficult. There are other online resources as well, but they do not offer pupils comprehensive assistance in the areas of aptitude, coding, and computer fundamentals. Many students simply waste a lot of time making these judgments and switching between resources as a result of the uncertainty. When you know what to study and how to study, placement studies are not difficult. Any student applying for a placement in the IT business is already proficient in coding; as a result, all that is required of them is to answer high-quality questions of various types to develop their confidence in handling challenging test questions. To determine whether they can do well under pressure from the timer and the test setting, the students should be ready to make the proper decisions and test their performance in the actual test. Students should not use many resources to prepare for placement exams; instead, they should be able to practise each of the three sections—aptitude, computer fundamentals, and coding—on a single platform.

### LITERATURE SURVEY

#### A. Survey on Problems of Students

The insights below are based on our research into the difficulties students face when preparing for placement.

- a. As a result of the ambiguity, many students simply waste a lot of time making these decisions and hopping between resources.
- b. There are numerous platforms available online for coding, aptitude, and computer fundamentals questions. All of these components are not, however, present on any of the internet platforms.

- c. Online tests are also accessible, but they don't produce any reports to let pupils know where they need to improve.
- d. In other cases, when a student takes the test but is not chosen for the interviews, they are unable to identify the errors they made and become more confused about how to pass the tests.

### B. Survey on existing platforms

The following are the observations based on our review of the existing systems.

- a. **HackerRank:**  
Programmers from all over the world can solve code challenges on the Hacker Rank coding platform. Programming languages supported by Hacker Rank include Java, C++, and PHP, and they cover a range of computer scientific fields. The accuracy of the output is evaluated when a programmer submits a solution to a programming challenge. On the Hacker Rank leaderboard, programmers are then ranked globally. Hacker Rank also holds competitions where programmers compete on a particular set of programming problems over a brief period of time before being ranked at the end of the event, in addition to hosting individual programming challenges. Companies can hire programmers based on their performance thanks to Hacker Rank. The Hacker Rank user interface is excellent. Although Hacker Rank provides a greater number of contests, they do not offer the same kinds of contests as other websites. Features like Aptitude and Computer Fundamental Subjects are not supported by Hacker Rank on their website. The questions in Hacker Rank are frequently of a type that is appropriate for students who are new to programming and have only recently started their journey with coding. The issue with HackerRank is that the practise area for coding has an editorial portion where users may read multiple solutions to a problem, making it simple to solve test cases.
- b. **CodeChef:**  
It is an international platform for programming competition that supports more than 50 coding languages and has a sizable community of programmers that assist students and other computer professionals in testing and enhancing their coding abilities. Its goal is to give both students and experienced software engineers a place to practise, compete, and get better. Code Chef holds regular ACM-ICPC practise competitions as well as monthly contests with rewards. In addition, it wants to foster a culture of programming in India by reaching out to children when they are still in school. Code Chef is more engaging than other platforms since it hosts contests of roughly three categories. The difficulty level of the issues offered is unexpected, which is a concern with Code Chef. Programming specialists are the ones who typically use Code Chef. Normally, those that are experts in programming use Code Chef over here as well.
- c. **PrepInsta:**  
PrepInsta is an online platform that offers various resources and preparation materials for students and professionals preparing for competitive exams and job placements, particularly in the field of information technology. It provides a wide range of content, including practice questions, study materials, interview preparation guidance, coding challenges, and placement preparation courses. It has features like Exam Preparation, Study Materials and Resources, Interview Preparation, Mock Tests and Practise Questions and Community and Discussion Forum. While PrepInsta offers several benefits and resources for exam preparation and job placements, there are a few potential drawbacks to consider like Limited Subject Coverage, Quality and Accuracy of Content, Lack of Personalization, Pricing and Access problems, Dependency on a Single Platform for placements can also cause problem and Lack of Real-Time Updates. These drawbacks not only apply to PrepInsta but can also apply to similar sites like PrepInsta.

**TABLE 1. Further Observations**

Observation	Inference
Quality of Questions	CodeChef is the best.
User Interface	HackerRank is best.
Quality of editorials	CodeChef is the best.
QA and Discussion forums	CodeChef and HackerRank are similar.
Prizes and rewards	HackerRank is the best.
Number of contest	HackerRank hosts more, but Codechef contest are of three types and more interesting.
Participation	Codechef attracts more international participation especially in the long challenge

## FUTURE PROSPECTS

The primary goal of this project is to provide a platform that will enable students to practise and take examinations in order to prepare for classes like coding, aptitude, and computer fundamentals. Along with the tests, question banks will be created for each of the parts. Users will have access to a dashboard that will show their most recent test results. Students will be observed during examinations in accordance with the test policies adopted by the company during placement exams. Following the generation of the test report, this will show the student's whole performance for the purpose of feedback and reflection. For the Coding issue to be resolved, a compiler must be created. It must be simple to use and manage. Java, Python, JavaScript, C, and

C++ are the most frequently used programming languages. These languages ought to be all supported by the compiler. The question banks must occasionally be updated with fresh, high-quality questions in order to remain relevant.

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## CONCLUSION

In this paper, we've gone over the various issues that arise for students as they navigate the placement process. We have also analyzed a number of websites that provide services of a similar nature. These websites that we reviewed are PrepInsta, CodeChef, and HackerRank. This platform, which we are developing, will improve the college's pool of competent resources and boost the number of placements that take place. Instead of using various platforms, integrating options like the Coding portion, the Aptitude section, and the Computer Fundamentals section into one platform makes learning more uniform for students.

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