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JB Placement Assessment

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Abstract: *The placement assessment platform is a web-based application designed to facilitate the recruitment process for companies and organizations. The platform provides a user-friendly interface for students to take assessment tests, and evaluate candidate performance. Candidates can also use the platform to create profiles, take mock exams, and attend assessments. The placement assessment platform is an effective solution for organizations of all sizes looking to streamline their recruitment process and identify the most qualified candidates for their open positions. The placement assessment platform is a comprehensive solution for employers to assess the skills and capabilities of job candidates in a standardized and objective manner.*

I. INTRODUCTION

Many students want to use and experience how placement exams are conducted. Many students want to solve previous questions asked by companies. Sometimes our college needs to conduct coding tests for students. Online exams portal is a website which students can use for placement preparation. The web application helps the user and its mission is to offer a quick and easy way to appear for the e-Examination.

The e-Examination system ensures security by allowing only registered users with a valid username and password to access the exam. The exam consists of multiple choice questions with appropriate options. Immediate results are provided upon completion of the exam, allowing users to view their performance.

ReactJS is a popular open-source JavaScript library that is widely used for building user interfaces. Developed by Facebook, it allows developers to build complex and interactive web applications with ease. One of the main advantages of ReactJS is its component-based architecture, which allows developers to create reusable and modular UI components. This means that instead of writing long and complex HTML and JavaScript code, developers can create small and isolated components that can be reused across different parts of the application. This approach makes the development process more efficient and helps to reduce code duplication, making it easier to maintain and update the codebase.

Another notable feature of ReactJS is its ability to work with other libraries and frameworks. ReactJS is a highly versatile JavaScript library that can be seamlessly integrated with a multitude of other tools and libraries. Some popular examples include Redux, which is used for managing application state, GraphQL, which is a query language for APIs, and React Native, which is used for building mobile applications.

By utilizing these tools and libraries with ReactJS, developers are able to build a wide range of applications, including mobile apps and progressive web apps. By utilizing these tools and libraries with ReactJS, developers are able to build a wide range of applications, including mobile apps and progressive web apps. Overall, ReactJS is a powerful and versatile tool that has revolutionized the way developers build web applications. Its component-based architecture, virtual DOM, and flexibility make it an excellent choice for building complex and interactive user interfaces.

Django is a powerful web framework for Python that equips developers with an extensive array of tools and functionalities to build complex web applications rapidly and effectively. It offers many pre-built features, including middleware, templating, database management, URL routing, and more, that can be conveniently tailored to fit specific project requirements. It was originally developed by web developers at the Lawrence Journal-World newspaper, and is now maintained by the Django Software Foundation.

One of the key features of Django is its powerful and flexible Object-Relational Mapping (ORM) system, which allows developers to work with databases in a more intuitive and Pythonic way. The ORM provides an abstraction layer between the database and the application code, allowing developers to interact with the database using Python code, without having to write SQL queries manually. This makes it easier to manage the database and reduces the likelihood of errors.

II. PROPOSED METHODOLOGY

In the Figure a system is displayed with backend as Django in the center which sends the HTML , CSS pages to the frontend which is React js which then sends back the API requests while the Django retrieves the data from the database which is SQLite here.

Modules are important to have a precise overview on the development of the project process so that while execution clarity of the next step is maintained. JB Placement Assessment has following modules:

- 1) Authentication
- 2) Aptitude
- 3) Communication
- 4) Code Editor
- 5) Results

JB Placement Assessment comprises these three important modules. Below, you will find a detailed explanation of each module.

- a) *Authentication*: This module takes the user authentication for the first time user should register from then on the user gives his credentials for login .It provides access control for the system by checking to see if a user's credentials match the credentials in the database of authorized users or in a data authentication server.
- b) *Aptitude*: This module is used to conduct an aptitude exam which contains Aptitude questions.
- c) *Communication*: This module is used to conduct exams for the users like a communication test where an audio will be played and after completion of the audio questions will be asked based upon the audio.
- d) *Code Editor*: This module is used to conduct Coding exams where a programming question will be given and the user has to write code in-order to solve the question and user answered code will be tested for correct output.
- e) *Results*: Here in this module the students or users can see the results in the dashboard.

III. LITERATURE REVIEW

Many different researches have focused on the subject of an online examination system these work can be represented as following: In the context of SIETTE, to regenerate an adaptive test would mean to create a new version of the test that is adapted to the needs or performance of the individual user, based on their previous answers and feedback provided by the system. The regenerated test would be different from the original test but would still cover the same topics and assess the same learning objectives. This process of regeneration helps to personalize the learning experience and improve the accuracy of the assessment. It can be used for instructional objectives, via combining adaptive student self-assessment test questions with hints and feedback. The authors of the EMS (Exam Management System) paper, Rashad et al., state that SIETTE (an existing exam management system) provides secure login and portability features, but lacks other important features such as resumption capability, multi-instructor support, and various types of randomization (question selection, distribution, and choice distribution). In other words, Rashad et al. suggest that SIETTE is lacking in several key areas that are important for a comprehensive and effective exam management system. (2010) proposed a web-based online examination system called Exam Management System (EMS). EMS manages the examination and auto-grading for students exams and supports conducting exams, answers, specify the exam period, register students ,delete students , show questions for students randomly, calculate and show the final results for students.

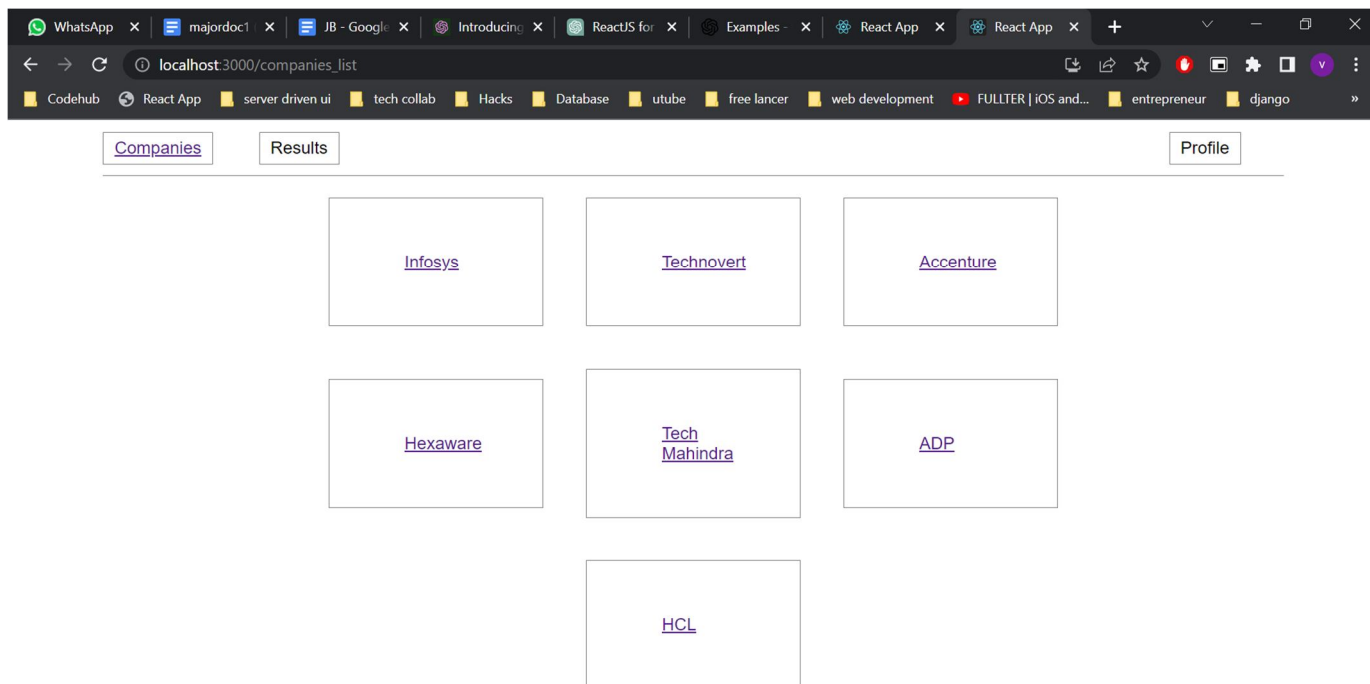
Alias et al. (2017) developed an online exam assessment system using open-source platforms. They used PHP and MySQL for the development of the system and tested it on a sample of students. The study found that the system was effective in conducting exams and grading them automatically. Huang et al. (2016) developed an online exam assessment system using cloud computing technology. The system was designed to be scalable and flexible, with the ability to handle a large number of students taking the exam simultaneously. The study found that the system was effective in reducing the administrative burden of exam administration.

Saleh et al. (2018) developed an online exam assessment platform for King Khalid University in Saudi Arabia. The system was designed to be easy to use and accessible to students and instructors. The study found that the platform was effective in improving the efficiency of exam administration and reducing the cost of exams. Alshammari (2019) conducted a literature review of online exam assessment systems. The review included studies on the benefits and challenges of online exam assessment systems and identified several key factors that can impact their effectiveness.

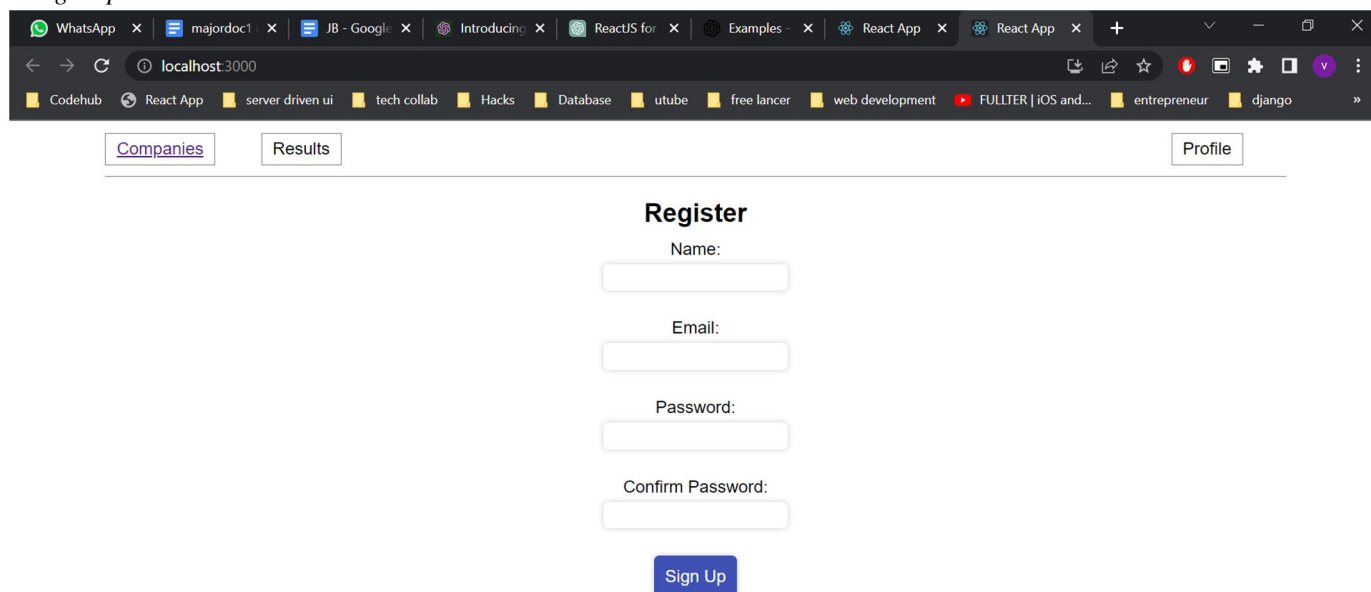
Njoku et al. (2020) conducted a systematic review of online assessment platforms. The review included studies on the effectiveness of various types of online assessment platforms, including platforms for objective and subjective assessments, and identified several key factors that can impact their effectiveness.

IV. RESULTS

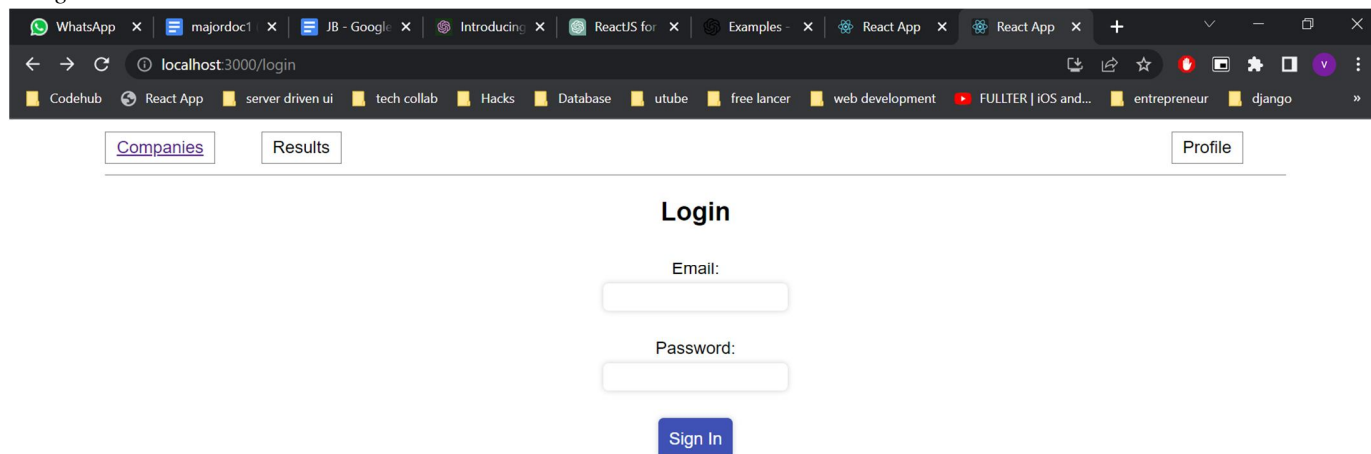
A. Home Screen



B. Sign Up Screen

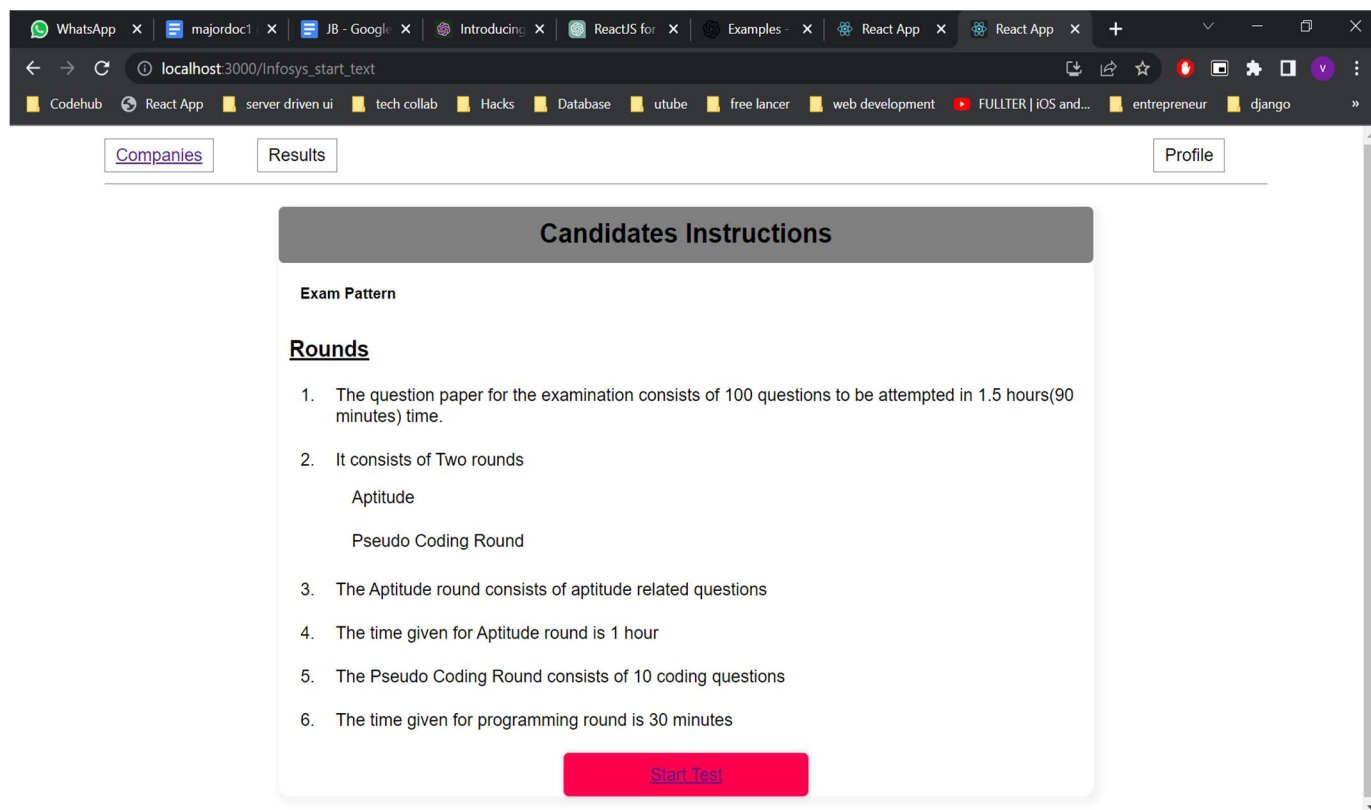


C. Sign In Screen



The screenshot shows a web browser window with the URL `localhost:3000/login`. The browser's address bar and tabs are visible at the top. Below the browser window, there is a navigation bar with three buttons: "Companies", "Results", and "Profile". The main content area is titled "Login" and contains two input fields: "Email:" and "Password:". Below these fields is a blue "Sign In" button.

D. Start Test Screen



The screenshot shows a web browser window with the URL `localhost:3000/Infosys_start_text`. The browser's address bar and tabs are visible at the top. Below the browser window, there is a navigation bar with three buttons: "Companies", "Results", and "Profile". The main content area is titled "Candidates Instructions" and contains the following text:

Exam Pattern

Rounds

1. The question paper for the examination consists of 100 questions to be attempted in 1.5 hours(90 minutes) time.
2. It consists of Two rounds
 - Aptitude
 - Pseudo Coding Round
3. The Aptitude round consists of aptitude related questions
4. The time given for Aptitude round is 1 hour
5. The Pseudo Coding Round consists of 10 coding questions
6. The time given for programming round is 30 minutes

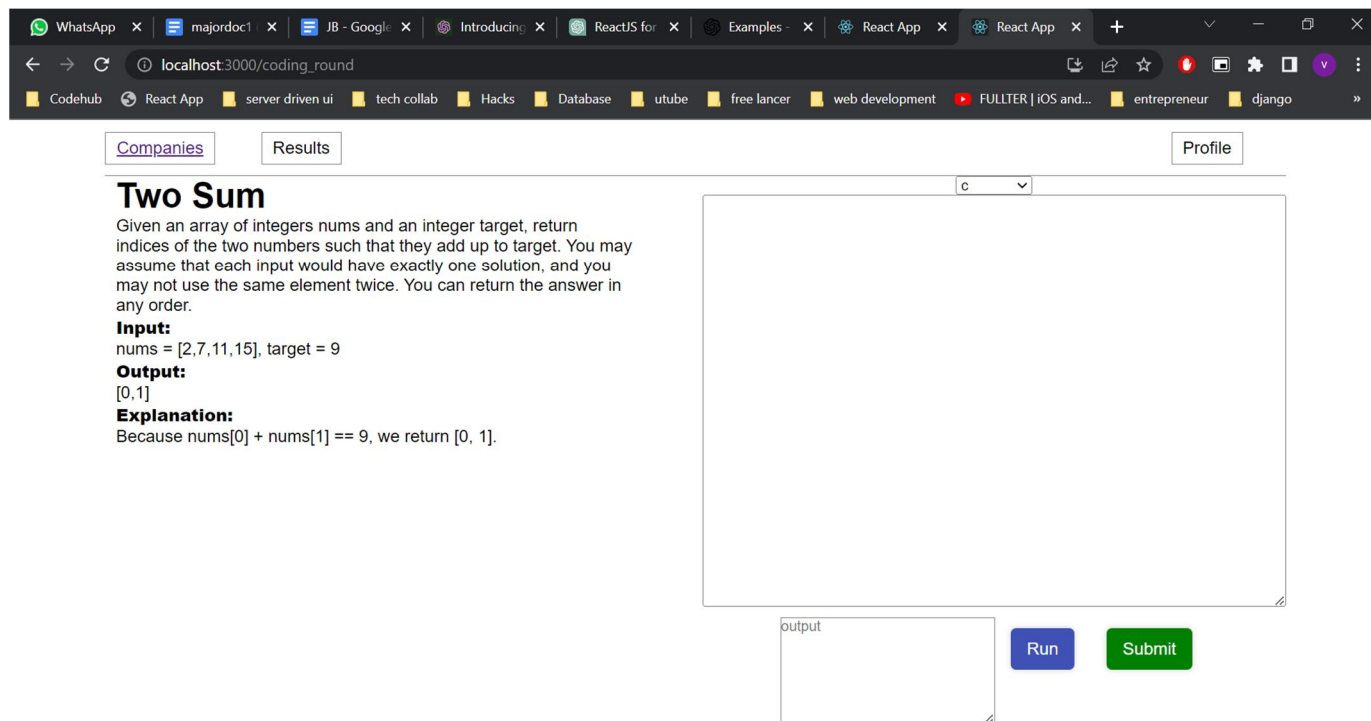
At the bottom of the instructions box, there is a red button labeled "Start Test".



E. Aptitude Exam Screen

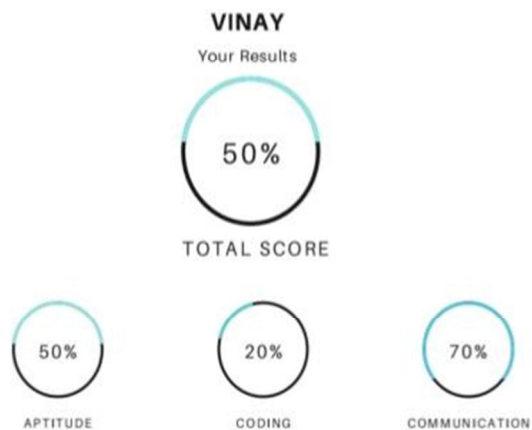
F. Communication Exam Screen

G. Code Editor



H. Student Individual Result Screen

Student Individual Result



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45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



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