**MINI PROJECT REPORT**

on

**Interview preparation website : CRACK IT**

Submitted

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in

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**DECLARATION**

We hereby declare that the synopsis of project entitled **CRACK IT** to be submitted for the Degree of **Bachelor Of Technology** in **Computer Science and Engineering (Artificial Intelligence and Machine Learning)** is our original work and the synopsis has not been submitted for the award of any degree, diploma, or fellowship of similar other titles in previous work. It has not been submitted to any other University or Institution for the award of any degree or diploma.

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**CHAPTER – 1**

**INTRODUCTION**

The interview preparation website, built using the MERN stack (MongoDB, Express.js, React, and Node.js), aims to provide a comprehensive platform for job seekers to enhance their interview readiness. The platform allows users to share their interview experiences and document the questions they were asked, offering valuable insights for others preparing for similar roles. By enabling users to filter interview experiences based on job description, work experience, and other criteria, the website facilitates targeted preparation. This community-driven approach empowers users to access relevant, real-world interview questions, improving their chances of success in future interviews.

**1.1 PROBLEM IDENTIFICATION**

In today’s competitive job market, candidates often face challenges in preparing for interviews due to the lack of access to relevant and recent interview questions. While general resources are available, they rarely provide specific insights tailored to particular roles, companies, or experience levels. This makes it difficult for job seekers to effectively prepare for interviews, leading to uncertainty and lower confidence. Furthermore, there is no centralized platform that allows users to share their personal interview experiences in a structured and accessible way, which could benefit others preparing for similar roles. This project seeks to address these issues by creating a community-driven platform that enables users to share, discover, and filter interview questions and experiences, ensuring targeted and relevant preparation.

**CHAPTER – 2**

**REVIEW OF LITERATURE**

**The Role of Community-Driven Content:** Studies have shown that community-driven content significantly enhances learning and preparation processes. In a study by Kahn and Law (2005), peer-shared knowledge was found to improve both the breadth and depth of understanding in professional learning environments. This principle has been effectively applied in platforms such as Stack Overflow, where users contribute questions and answers, creating a vast repository of knowledge that benefits the entire community.

**Personalized Learning and Filtering Mechanisms:** Research in personalized learning and adaptive systems, such as that by Brusilovsky (2001), highlights the importance of customization in improving user engagement and success rates. Personalized learning tools, such as those used in modern e-learning platforms, allow users to focus on the most relevant content, making their learning process more efficient. Similarly, in the context of interview preparation, providing users with filtering mechanisms to access interview questions and experiences tailored to their needs—whether based on their job description, industry, or level of experience—would enhance the relevance and effectiveness of the preparation process.

**Gaps in Existing Solutions:** Despite the success of existing platforms, there remains a gap in providing a more targeted, role-specific approach to interview preparation. Platforms like Glassdoor offer a broad range of reviews and experiences, but often lack a structured way for users to easily filter content according to their specific needs. Additionally, while platforms like LeetCode excel in technical interview preparation, they are limited to coding-based questions and do not cater to a wide variety of job roles or non-technical interviews.

**CHAPTER – 3 PROPOSED METHODOLOGY**

**3.1 PROBLEM STATEMENT**

The challenge in interview preparation lies in the lack of access to specific and up-to-date interview questions tailored to particular job roles, industries, and experience levels. Existing platforms provide generalized information but fail to offer personalized filtering options for focused preparation. This project aims to create a community-driven platform where users can share and discover real-world interview questions and experiences, offering tailored and relevant resources to improve interview readiness.

**3.2 AIMS AND OBJECTIVES**

The primary aim of this project is to create an efficient and user-friendly interview preparation platform that leverages community-driven content to help users better prepare for job interviews. The platform seeks to enable users to document and share their personal interview experiences, providing valuable insights for others. Additionally, it aims to offer personalized filtering options that allow users to search for interview questions and experiences based on specific job roles, industries, and experience levels. The key objectives include implementing a secure authentication system, designing an intuitive user interface, and ensuring that the platform provides a relevant and focused preparation process through advanced search and filtering capabilities. By achieving these objectives, the project aspires to enhance the interview preparation process by making it more tailored, practical, and accessible for all users.

**3.3 TOOLS AND TECHNOLOGIES**

The tools and technologies used in this project include MongoDB, Express.js, Node.js, HTML, CSS, and JavaScript, all of which play a crucial role in developing a dynamic and efficient interview preparation platform. MongoDB, along with Mongoose, is used as the database to store and manage user data, including authentication details, interview experiences, and filtering preferences. Express.js, a robust backend framework, works in conjunction with Node.js to handle server-side logic, API requests, and secure communication between the client and server. On the frontend, HTML and CSS are utilized to structure and style the user interface, ensuring a responsive and user-friendly experience. JavaScript is employed on both the frontend and backend, enhancing interactivity and enabling smooth functionality across the platform. Together, these technologies create a seamless full-stack application that allows users to efficiently share and discover interview experiences.

**3.4 ETHICAL CONSIDERATIONS**

In developing this interview preparation platform, several ethical considerations have been taken into account to ensure user privacy, data security, and fairness. User authentication is securely managed through JavaScript Web Tokens (JWT), which provide a robust method for handling sign-ups and logins while preventing unauthorized access. Personal information is stored securely, employing encryption and best practices to safeguard user data. Additionally, the platform ensures that shared content, such as interview experiences, respects the confidentiality of companies and interview processes, avoiding any violation of intellectual property or privacy policies. To foster a fair and supportive community, the platform promotes positive interactions and discourages harmful content, such as discriminatory or misleading information. Users are encouraged to share genuine experiences while maintaining respect for others' rights and confidentiality, ensuring the platform remains an ethical and trustworthy resource for all.

**CHAPTER – 4**

**PRACTICAL IMPLEMENTATION**

**1. Planning:** The initial phase involves gathering requirements and defining the project scope. This includes identifying the core features of the platform, such as user authentication, experience sharing, and filtering options.

**2. Development Environment Setup:** The development environment is set up using the MERN stack, which includes MongoDB, Express.js, React, and Node.js. MongoDB is utilized as the NoSQL database to store user data and interview experiences. Mongoose is incorporated for object data modeling, enabling easy interaction with MongoDB. Node.js serves as the backend runtime environment, while Express.js is used to build the server and handle API requests.

**3. Backend Development:** The backend is developed using Express.js and Node.js, focusing on creating RESTful API endpoints for user authentication, interview experience management, and filtering capabilities. JWT is implemented to handle user sign-up and login securely, ensuring that users can access their data and share experiences while maintaining privacy. Middleware is created to validate JWTs and protect sensitive routes, allowing only authenticated users to perform specific actions, such as posting or accessing interview experiences.

**4. Frontend Development:** The frontend is built using React, which enables the creation of reusable components and a dynamic user interface. HTML and CSS are used to structure and style the application, ensuring a visually appealing design. The frontend communicates with the backend through API calls, allowing users to sign up, log in, share their interview experiences, and filter content based on their preferences

**5. Testing:** Testing is a critical phase that ensures the platform functions correctly and meets user requirements. User acceptance testing involves gathering feedback from potential users to identify any issues and areas for improvement.

**6. Deployment:** Once testing is complete, the application is prepared for deployment. A cloud hosting service, such as Heroku or AWS, is selected to host the application, ensuring scalability and accessibility.

**CHAPTER – 5**

**EXPECTED OUTCOME**

The expected outcome of the interview preparation platform is to create a comprehensive, user-friendly resource that significantly enhances job seekers' interview readiness. By providing a space for users to share and access real-world interview experiences, the platform aims to facilitate targeted preparation tailored to specific job roles and industries. Users can expect to find a wealth of relevant interview questions and insights, helping them build confidence and reduce anxiety before interviews. Additionally, the implementation of personalized filtering options will enable users to efficiently navigate content that aligns with their unique preparation needs. Ultimately, the platform is designed to empower job seekers by fostering a supportive community and improving their chances of success in securing job offers.

**CHAPTER – 6**

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