Full Stack Development Test

Syllabus:

Rounds 1 & 2

Back to Basics - This round consists of 40 questions wherein the candidate is tested on the soundness of computer science and fullstack development fundamentals. The candidate can expect questions around the core concepts of computer science like computer networks, operating systems, basic programming, databases, HTML, CSS, Javascript etc.

Assess your Algo - In this round, the candidate is expected to answer 2 coding questions that test their problem-solving skills and algorithmic thinking. The candidates are required to code in the provided Integrated Development Environment (IDE) and solve the coding challenges within the time provided.

Rounds 3

Building the Back - In this round, the candidate is required to code and develop the backend of a web application (using either NodeJS or Python/Django or Java/Spring frameworks). The candidate will be provided with the problem statement and user stories (instructions on what features of the app need to be built) along with a boilerplate code template. Within 2 hours, the candidate is expected to build the solution and also provide a screen recording explaining the code and functionality of the application he/she has developed.

Round 4

Creation of Front - In this round, the candidate is required to code and develop the front end of a web application (using React). The candidate will be provided with the problem statement and user stories (instructions on what features of the app need to be built) along with a boilerplate code template. Within the time, the candidate is expected to build the solution and also provide a screen recording explaining the code and functionality of the application he/she has developed.

Round 5

Face the Interview - In this 45 min - 1 hr interview, a senior Fullstack Leader will test the candidate's ability to build products and work well with product teams in an organization. The candidate will be grilled on their fundamentals in algorithms along with concepts in object oriented programming and the fullstack development

framework. The candidate might also be interviewed on the projects they mention on the resume and asked to solve problems live through screen sharing.

Computer Science Fundamentals	**Suggested Reading Materials**
1. **Basics of Programming - Loops, Conditionals, Functions, Recursion.** 2. **Time and Space Complexity.** 3. **Searching and Sorting - Linear Search, Binary Search, Quick Sort, Radix Sort, Merge Sort, Insertion Sort etc.** 4. **Basic Data Structures - Array, Linked List, Stack, Queues. Advanced Data Structures - Trees, Heaps and Graphs.** 5. **Object Oriented Programming- Inheritance, Polymorphism** 6. **Computer Networks, Database Management, Operating Systems**	1. **Database System Concepts** 2. **Introduction to Algorithms** 3. **Operating Systems** 4. **Computer Networks**
Full Stack Development	**Suggested Reading Materials**
1. **HTML, CSS, Responsive Design** 2. **Javascript- Fundamentals, Express, Node.js (or) Java - Spring MVC (or) Python - Django, React.JS** 3. **MongoDB, SQL** 4. **APIs, System Design**	1. **Javascript for Frontend** 2. **Html and CSS** 3. **Backend Web development**