



MAKING YOU  
DEPLOYMENT  
READY

# DEMUX ACADEMY



## GREETINGS OF THE SEASON FROM <DEMUX ACADEMY>

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We are glad you trusted us with this important phase of your career. In this series, we are trying to list down the interview process and most frequently asked questions of most sought after companies. This data is compiled specifically for people who are sitting for placements in the next **2-3 months.**

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# ABOUT US

Demux is the country's **first incubator** for college students and we have students only from top **IITs/NITs/BITs**. We don't hesitate in boasting **98% conversion** from our previous batches and are now working in companies like **Google, Amazon, Microsoft, Flipkart etc.**

## MEET OUR INSTRUCTORS



**Manvi Garg**  
IIT Kharagpur  
**Google**



**Somil Gupta**  
NIT Allahabad  
**Google**



**Sunny Dhamnani**  
IIT Kharagpur  
**Adobe**



**Sanket Kedia**  
IIT Kharagpur  
**ORACLE**



**Sudhanshu Bahety**  
IIT Kharagpur  
**salesforce**



**Varun Garg**  
NIT Allahabad  
**Flipkart** 



One can either apply directly or get approached by the recruiter based on their performance in Google CodeJam.



## ■ ONLINE TEST QUESTIONS



- 01. Min Amplitude
- 02. Ways to Split String
- 03. Watering Flowers
- 04. Minimum Domino Rotations For Equal Row
- 05. Delayed Projects
- 06. Min Cost to Keep Employees
- 07. Statistics
- 08. Cut The Cake
- 09. Best Fruit



## ■ INTERVIEW CODING QUESTIONS

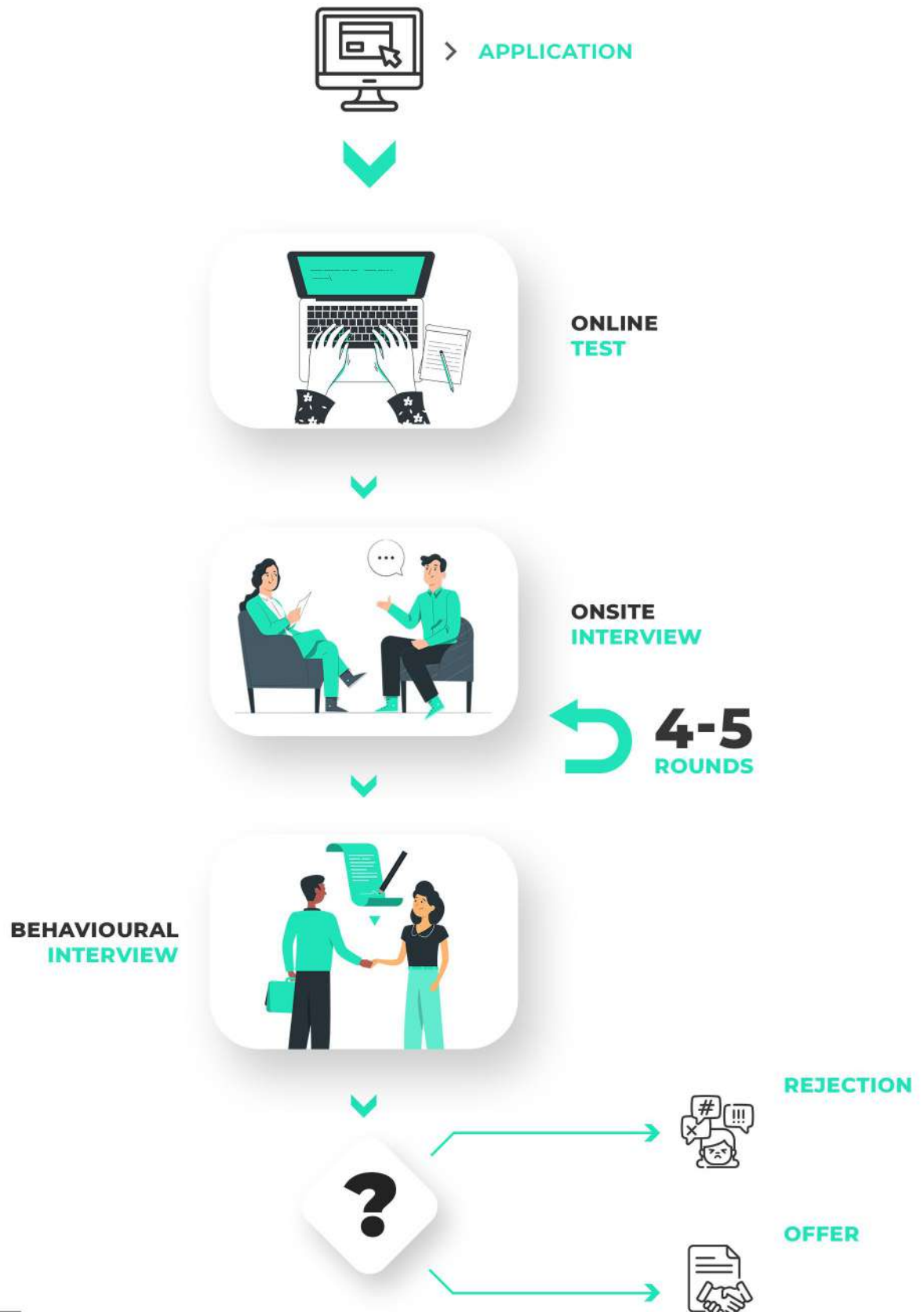
- 01. Given a matrix find all minimum values of sub-matrices size k
- 02. Find Most Similar Path In Graph
- 03. Find median of doubles from 1000 machines
- 04. Design a organization pharmacy shop with managers
- 05. Determine if word is typo because of stuck key







You can either sit during campus placements or ask someone from Amazon to refer you for the position or apply online (rarely converts).



## ■ ONLINE TEST QUESTIONS



01. Copy List with Random Pointer
02. Merge Two Sorted Lists
03. Subtree of Another Tree
04. Search a 2D Matrix II
05. Critical Connections
06. Favorite Genres
07. Two Sum - Unique Pairs
08. Spiral Matrix



## ■ INTERVIEW CODING QUESTIONS

01. English Words to Integer
02. Hit Counter
03. Minimum Transaction
04. Valid Binary Tree
05. Split Array Largest Sum
06. Find kth smallest in wavy array





> APPLICATION



ONLINE  
TEST



ONSITE  
INTERVIEW

4-5  
ROUNDS



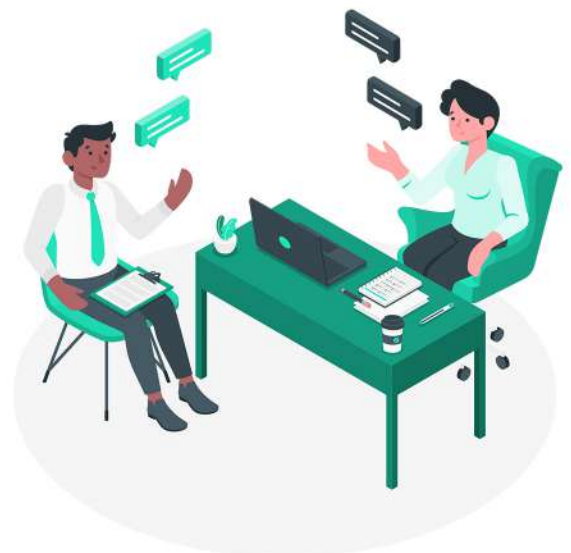


## ■ ONLINE TEST QUESTIONS

01. Count Of Hours Variations
02. Aladdin Checkers Game
03. Number of fractions that sum up to 1
04. Numbers With Equal Digit Sum
05. Min Moves to Make String Without 3 Identical Consecutive Letters
06. Max Network Rank
07. Min Swaps to Make Palindrome
08. Longest Substring Without 2 Contiguous Occurrences of Letter
09. Lexicographically Smallest String
10. Min Deletions to Make Frequency of Each Letter Unique

## ■ INTERVIEW CODING QUESTIONS

01. Design the T9 predictive text algorithm and system
02. Minimal Bus
03. Coloring Grid
04. How would you solve  $7^{149}$ ?
05. Print Binary Tree
06. Delete Minimum Intervals
07. Maximum Spliced Array





> APPLICATION



PROGRAMMING  
TEST



TECHNICAL  
INTERVIEW

4-5  
ROUNDS



HR  
INTERVIEW



REJECTION



OFFER



## ■ ONLINE TEST QUESTIONS

01. Cherry Pickup
02. Trapping Rain Water
03. Insert Delete GetRandom O(1)
04. Alien Dictionary
05. Regular Expression Matching
06. Add Two Numbers
07. Largest Rectangle in Histogram
08. Best Time to Buy and Sell Stock III



## ■ INTERVIEW CODING QUESTIONS

01. Sudoku solver
02. Sums in a Triangle
03. Reverse Sequence of Vowels
04. External Merge Sort
05. Print all possible words from phone digits
06. Largest Sum Contiguous Subarray
07. Expression Tree





## ■ ONLINE TEST QUESTIONS

01. Two Sum
02. Add Two Numbers
03. Median of Two Sorted Arrays
04. Cherry Pickup
05. Longest Substring Without Repeating Characters
06. Reverse Integer
07. Combine Two Tables
08. Longest Palindromic Substring
09. 3Sum
10. Merge Two Sorted Lists



## ■ INTERVIEW CODING QUESTIONS

01. Sort an array of 0s, 1s and 2s
02. Check if a number is Palindrome
03. Pascal's Triangle
04. Trapping Rain Water
05. Count Inversions in an array | Set 1 (Using Merge Sort)
06. Design an LRU cache
07. Implement Hash Map / Unorder Map
08. Implement Least Recently Used Cache
09. Find a pair with given sum in a Balanced BST.







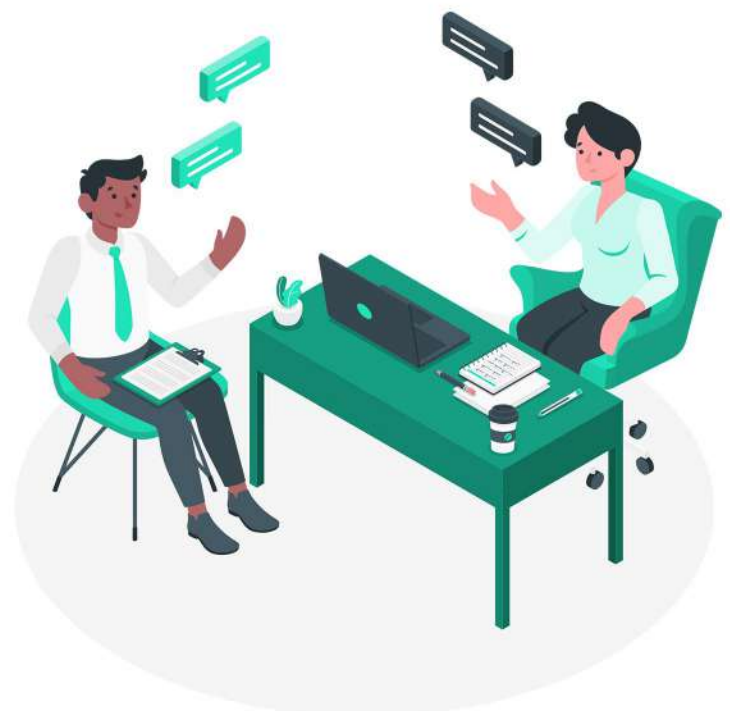
## ■ ONLINE TEST QUESTIONS

01. Word Squares
02. LRU Cache
03. Data Stream as Disjoint Intervals
04. Brick Wall
05. Delete Node in a BST
06. Design Hit Counter
07. Two Sum
08. Merge k Sorted Lists
09. Frog Jump
10. Meeting Rooms II



## ■ INTERVIEW CODING QUESTIONS

01. Parse Escaped Characters
02. Print parents of all leaves in a BST
03. Valid Parentheses & Array to BST





## ■ ONLINE TEST QUESTIONS

01. Online Assessment 2019
02. Find The Rank
03. Shares Purchase
04. Spiral Matrix
05. Trapping Rain Water
06. High Five
07. Minimum Size Subarray Sum
08. Game of Life
09. Median of Two Sorted Arrays



## ■ INTERVIEW CODING QUESTIONS

01. Find state for a given version number
02. Median Of Sorted Arrays & Best Avg Score
03. Parse / Filter Logs
04. Cycle In Array & Trapping Rain Water
05. Smallest subarray with sum greater than a given value
06. Highest Average Score & Power of 10



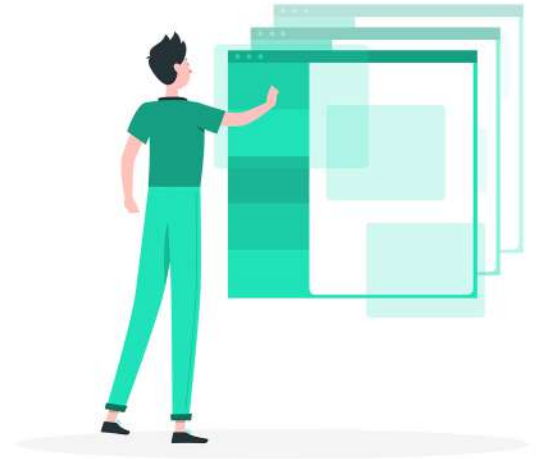
# FACEBOOK





## ■ ONLINE TEST QUESTIONS

01. Verifying an Alien Dictionary
02. Minimum Remove to Make Valid Parentheses
03. Valid Palindrome II
04. Remove Invalid Parentheses
05. Product of Array Except Self
06. K Closest Points to Origin
07. Subarray Sum Equals K
08. Integer to English Words
09. Alien Dictionary
10. Add Strings



## ■ INTERVIEW CODING QUESTIONS

01. Find the most frequent element in all intervals
02. Merge K Sorted Arrays
03. Fuel Economy
04. Candy Crush 1D
05. Reddit Upvote System
06. Natural Sort Order

