BOSSCODER ACADEMY X REVANTH MURIGIPUDI

HOW TO ACE YOUR NEXT TECH INTERVIEW

MAANG

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DISCLAIMER

If you have :

- Covered DSA system design, low-level design, and machine coding
- Developed relevant projects to match job description

Then, **this one is for you**

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PREPARE-REVISE-PRACTICE

- **Fill the gaps** in your knowledge of DSA, System Design, Low-level design, Machine coding
- While polishing, **make flashcards** and **revise** them 10-15 minutes before
- Do company **research** and **thoroughly** read JD → Organization often ask questions :

Why do you want to work with us?

What difference do you find here?

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REVISING BEFORE THE **DSA ROUND**

- Don’t grind theory, learn by **practicing problems** & **solving patterns**

  Examples

  - Array is sorted?
    can you use a binary search? two pointers?
  - Running into corner cases with linked lists?
    use dummy nodes
  - Subarray or substring problem with some conditions? - a sliding window? DP?
  - Exploring multiple indices in a matrix at once? - maybe (breadth-first search) BFS?

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- Participate in the **contests** & see how well you perform against the time
- Use the leetcode platform efficiently

Link for ⟶ How to use leetcode in an optimized way

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DURING **DSA INTERVIEW**

- **Don't** make assumptions → **ask** questions → **think** of multiple approaches → **make** a decision

  Examples

  - Prematurely jumping into a **dynamic program approach** when it might be a greedy problem
  - Using a **Dijkstra algorithm** when it might be a simple **BFS approach**

- Always begin with a **brute force approach** & gradually move to an **optimal approach**
- Pay attention to any hints given by the **interviewer** & **use smartly**

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- Think about the **edge cases** before solving the problem and discuss them with the **interviewer**.
- Tell the **time** & **space complexity** of all your approaches (brute or optimal)
- Use **proper coding conventions** while writing code following proper **syntax**, **indentation**, **naming conventions** etc.

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BEFORE **THE SYSTEM DESIGN** INTERVIEW

- Study **fundamental concepts** like:
  - microservices
  - scaling
  - caching
  - CAP theorem
  - sharding
  - containerization
  - types of databases
  - message queues
  - load balancers, etc
- Watching lots of **mock interviews**, builds intuition of how to **approach** a **design problem** from the ground up

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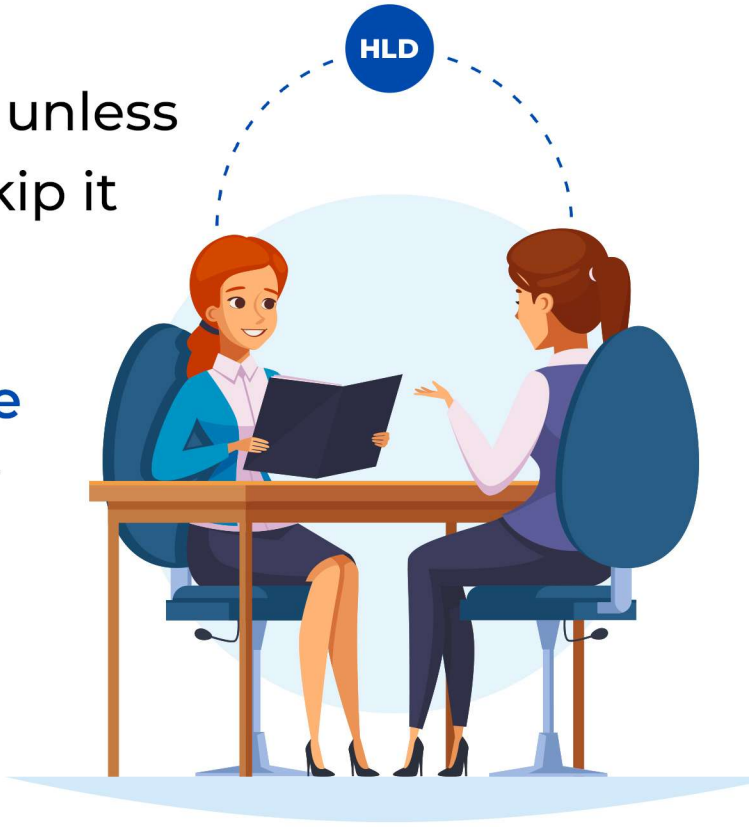
DURING **THE SYSTEM DESIGN** INTERVIEW

- Drive **functional**/**non-functional** requirements discussion in the beginning
- Do **capacity estimations** unless the interviewer asks to skip it explicitly
- Consider trade-offs, **while choosing** one entity over another



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Examples

- Quote Logical Explanations for →

  Why do you prefer a NoSQL DB instead of a relational?

  Why use a WebSocket instead of HTTP long polling?

- Start from the **most basic component** & gradually build on it!

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Examples

- Load balancer to route traffic to services, & one service talking to the database, another service pulling messages from a message queue, etc.

- Adapt your **architecture**/**design** on the fly as per the discussion
- Ask if the interviewer wants you to write a **DB schema** as well?
- Explain the **API contracts**, if you have got time left!
- **System design** interviews are mostly discussion-driven, it's important you **constantly** discuss your thoughts

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BEFORE **LLD INTERVIEW**

- Learn **SOLID principles** and understand design patterns

Examples

Creational - singleton, factory, builder

Structural - adapter, decorator, facade

Behavioral - observer, strategy, command

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- **Practice** class designs for famous interview problems to **understand the flow**

Examples

Designing movie booking application/car rental system/parking lot system

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DURING **LLD INTERVIEW**

- Clarify the **functional requirements** before designing (some interviewers expect you to write API contracts in **LLD rounds** as well, get it clarified)
- Start with a **very high-level class**, and drill down into components one by one as you seem fit.

Examples

- For a movie booking **LLD problem**, start with a theater class containing a list of shows/screens objects, further containing seats, movie details, etc.

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- Talk to the interviewer if they want you to **write pseudo code** for some functionality or not
- Remember, there is no one fixed solution to **design-related problems**, it is entirely discussion & requirements driven!

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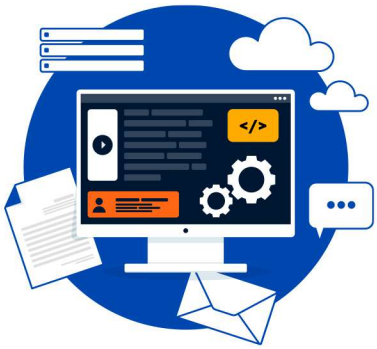
BEFORE **MACHINE CODING** INTERVIEW

- Learn to write **proper executable code** for popular problems → snake and ladders, tic tac toe, chess, parking lot, elevator system, in-memory database & search engine, distributed cache, etc



- Take **1-2 hours** to at least write one **functionality** end to end & execute it against multiple test cases
- While practicing, read other's code by searching the problem statement from **Leetcode** or **Github**

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DURING **MACHINE CODING** INTERVIEW

- **Do not over-commit** as you have only a couple of hours out of which **20-30 mins** go away for discussing requirements themselves
- Start with a barebones structure using design patterns and **SOLID principles** and code your way up to **functionality**
- Aim to finish at least **1-2 core features** from requirements.
- Don't forget to **execute your code** for multiple test cases including the edge cases

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MANAGERIAL AND **BEHAVIORAL** ROUND

- Use the **STAR approach** and "STAR" stands for "Situation, Task, Action, Result
- Answer by **describing the project (situation)**, explaining what you had to deliver **(task)**, what steps you took to complete **(action)**, and the outcome **(result)**.
- For this Study the **architecture** of your project end-to-end. Brief the **project's relevance** in the real world.

STAR

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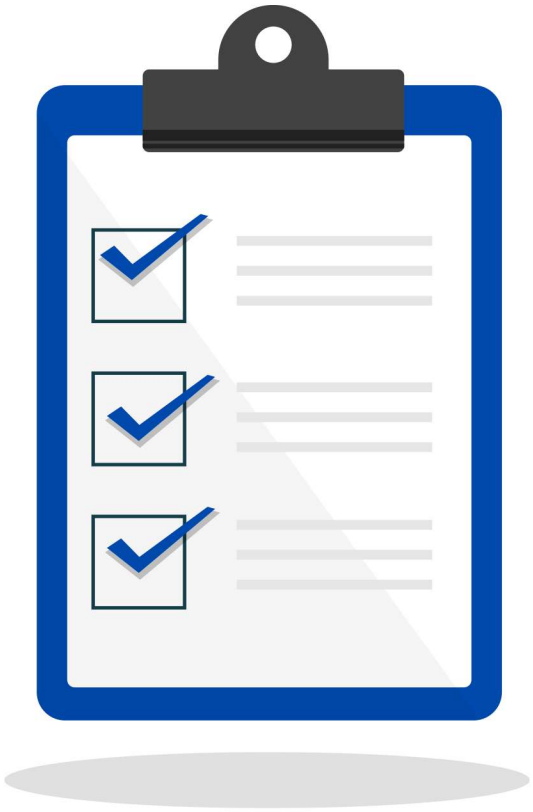
- Here's your list of all imp frequently asked questions
- Prepare a **30 sec** to 1min elevator pitch for avoiding the mess



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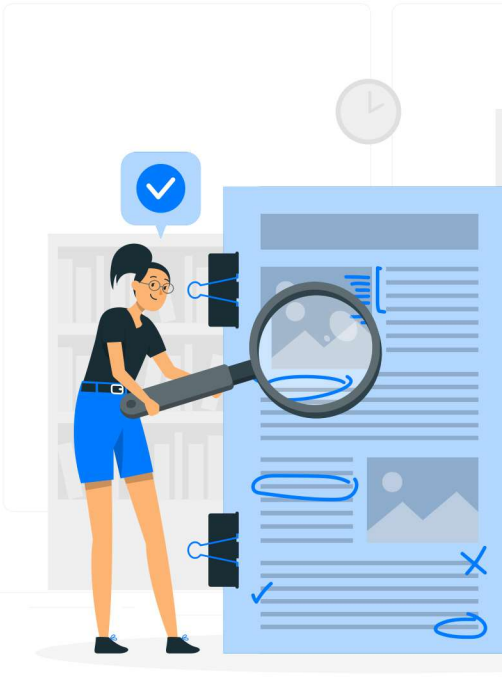
KNOW YOUR RESUME

- Be thorough with everything you have **mentioned**
- Keep some points handy for

  > **"Tell me something NOT mentioned in your resume"**

- Know the **outcome** and **impact** of the project on business value
- Mismatched information creates **wrong impression**



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GIVE **MOCKS INTERVIEWS**

- Take feedback **constructively** & **focus** on mending the mistakes
- Record it, **Watch** + **Listen** to your interview to asses body language tone (em, uh) and speech errors
- **Practice mocks** till you get confident enough to ace any interview

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AT **THE END**

- **Frame** a few questions to ask the interviewer at the end of the discussion
- Here is your list of questions to be put at the end
- Once you are done, reflect back with improvement
- Asking **relevant questions** shows **your interest** in the role & organization, so **make it count**

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MISCELLANEOUS

- Provide **concise responses**. No lengthy stories
- **Summarize answers** in 2-3 mins unless probed for further explanation.
- **Be honest**, If you don't know about some topic, **answer smartly**

> **"I have not worked on Redis, but yes I know a little bit about cache and I am ready to learn"**

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WHY BOSSCODER

- **200+** alumni placed at Top **product-based** companies
- More than **120% hike** for every **2 out of 3** working professional
- Avg package of **22 LPA**

I got placed at ByteDance Singapore and I am very thankful to **Bosscoder Academy**

Irshad
ByteDance

Bosscoder gives you everything starting from **DSA**, **LLD** and **HLD** followed **CS Fundamentals**

Dheeraj Barik
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