

# TOP 25

# SYSTEM DESIGN

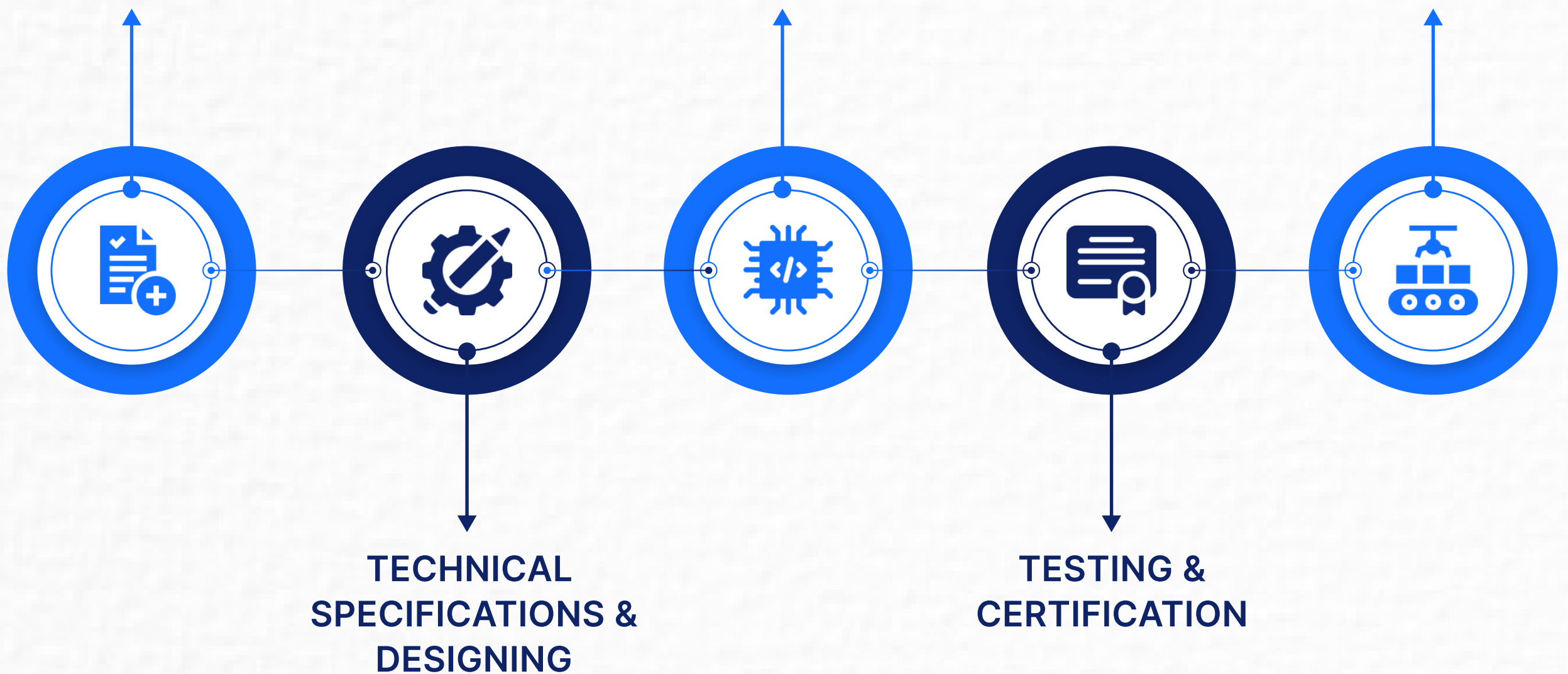
## INTERVIEW QUESTIONS



PROJECT  
REQUIREMENTS

EMBEDDED  
SOFTWARE

MASS  
PRODUCTION



*For Data Engineering role*



## **\*Disclaimer\***

Understanding System design for data engineering can be tough, especially for working professionals.

This document is here to guide you through the key topics you need to cover if you're already in the transition phase.

It will be a valuable resource to help you navigate your journey effectively.

## QUESTION-1

# How can you design a URL shortening service like Bitly?

- URL shortening services create special brief links that redirect users as they click on those links.

### Steps:

- Short hash generation occurs for the initial URL.
- The matching information must be stored within a database.
- The system routes users toward the short URL destination when they interact with it

### Diagram:

User → Short URL Service → Database (Store URL Mapping)  
→ Redirect to Original URL