

# Assessment Test: Backend Engineer

**Candidate: Somanishekhar**

## Introduction

Welcome to the Backend Engineer Assessment! This test will evaluate your technical skills and problem-solving abilities relevant to the Backend Engineer position at HipVan. Please read each question carefully and provide your answers accordingly.

## Instructions

Instructions: For multiple-choice questions, select one answer from the options provided. For open-ended questions, please provide a clear and concise response. You have 60 minutes to complete this assessment.

## Technical Skills

***Q1. What is your preferred approach for designing scalable data pipelines?***

- a) Microservices architecture
- b) Modular monolith approach
- c) Centralized data warehouse
- d) Data lake approach

***Q2. How would you optimize endpoint performance in a RESTful API?***

***Q3. What is your experience with cloud-based data storage solutions?***

- a) No experience
- b) Basic knowledge
- c) Intermediate expertise
- d) Advanced proficiency

## **Problem Solving**

***Q1. Design a scalable architecture for integrating data from various sources (e.g., databases, APIs) and processing it using Python. Consider scalability, performance, and reliability.***

***Q2. What would you do to ensure data quality in a large-scale data integration project?***

- a) Implement data validation rules
- b) Use data profiling techniques
- c) Leverage data quality tools
- d) Monitor data for anomalies

## **Scenario-based Questions**

***Q1. You are tasked with setting up an integration between HipVan's analytics platform and a third-party marketing analytics tool. Describe your approach to establishing this integration, including any necessary data transformations or processing.***

***Q2. What would you do if you noticed a significant slowdown in API performance due to increased traffic?***

- a) Add caching mechanisms
- b) Optimize database queries
- c) Use load balancing techniques
- d) Implement rate limiting