



Backend Engineer | Assignment

Solana Backend Developer Take-Home Assignment

Overview

Design and implement a backend service that reads from the Solana blockchain, focusing on comprehensive transaction analysis and data retrieval.

Time Allocation

- **Estimated Time:** approximately 2 hours
- **Goal:** backend solution for Solana blockchain transaction retrieval

Project Requirements

Develop a backend service that will read from the Solana blockchain to get data in real-time and support retrieving historical data.



Feel free to use any coding language you wish — Typescript will be easiest as there is the most support for Solana with it.

1. Blockchain Data Retrieval

- Connects to Solana Devnet/Mainnet
 - Use a free RPC such as Helius or <https://extranode.com/>
- For a specific wallet/account address:
 - Retrieves and processes blockchain transactions searching backwards

- Retrieves and processes blockchain transactions in real-time

2. Transaction Processing

- Design a module to process transaction data
- Design a schema to normalize the Solana transaction data for usage downstream
- Ensure every transaction is sent to the processor
- *The processor does not need to be a separate service or tied to any third party. The goal is to get a high level understanding of how you think about processing the retrieved data.*

3. Additional Design Questions

For this section, no code is required. Please write up your thoughts in the README included with your code.

1. What are some issues that could occur with watching transactions in real-time that then need to be processed downstream? What are some strategies you would use to deal with these issues?
2. What is your suggested tech stack / architecture for this service?

Deliverable Requirements

- Complete source code
- Git repository or zip file
- Comprehensive README.md including:
 - Project setup instructions
 - Dependencies
 - How to run the project
 - One-command start script

- Any additional notes or considerations

Judgement Criteria

1. Readme
2. Single command to start project
3. Does everything work?
4. Code structure and quality
5. Answers to design questions