

Apica Full stack Engineer Assignment

GOALS

1. Develop a LRU cache with GET / SET / DELETE API.
2. Build a React application that consumes the LRU cache API's.

REQUIREMENTS:

1. Develop a LRU Cache

The cache will store Key / Value with expiration. If the expiration for key is set to 5 seconds, then that key should be evicted automatically from the cache after 5 seconds.

Must Haves:

- Backend should be built on **Golang**.
- The GET / SET / DELETE method in cache should be exposed as API endpoints.
- Cache should be concurrent in nature.
- Use ADT data structures wherever possible.

2. Develop a React Application

- That consumes Get API to get the key from cache.
- That consumes Set API to add new key/value pairs with customizable expiration times.

Good to have:

- Create a **WebSocket** which will reflect all the current key values pairs with their expiration time dynamically in the UI.

ADDITIONAL NOTES:

- The code should be shared as a **GitHub repository**, with an attached **README.md** file with setup instructions and any additional information. (MUST)
- Please **attach resume** with the assignment in the email thread.
- The focus is on code quality, functionality, and adherence to the requirements.
- Consider edge cases, error handling, and providing a clean user interface.
- Follow best practices.