

## 1. User and Posts Fetch with Promise Chaining

Write a function that:

- Fetches user data from <https://dummyjson.com/users/1>.
  - Uses the fetched user's `id` to fetch their posts from <https://dummyjson.com/users/1/posts>.
  - Logs the user's `firstName` and the titles of their posts.
  - Use **Promise chaining** to implement this.
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## 2. Error Handling with Retry Logic (Promises Only)

Write a function that:

- Fetches a post from <https://dummyjson.com/posts/1>.
  - Simulate a failure by using an incorrect URL (e.g., <https://dummyjson.com/post/1>).
  - Logs an error message if the fetch fails.
  - Retries the fetch up to 3 times.
  - Use Promises (not `async/await`) to handle retries and error handling.
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## 3. Sequential vs Parallel Fetches

Write two functions to fetch data from the following APIs:

1. <https://dummyjson.com/users>
  2. <https://dummyjson.com/posts>
  3. Fetch the data **sequentially**, ensuring the second fetch starts only after the first fetch is completed.
  4. Fetch the data **in parallel** using `Promise.all` to execute both fetches at the same time.
- Compare and log the time taken for both approaches.
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#### 4. Retry Logic with Exponential Backoff

Write a function that:

- Fetches a post from <https://dummyjson.com/posts/1>.
  - Implements retry logic:
    - Retry the fetch operation up to 3 times if the request fails.
    - Double the delay between retries (e.g., 1 second, 2 seconds, 4 seconds).
  - Logs whether the data fetch succeeded or failed after all retries.
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