Service-Oriented Architecture

University of Alberta
Jeff Pal
Nov 2023

Explain how the Trello web application adheres to all REST design principles and constraints. Address the five aspects of design (specifically client-server architecture, layered, stateless, cacheable, uniform interface).

Client-server

Trello web application represents the client, and the server is the backend that responds to client responses. The client (web browser) interacts with Trello's servers to request and receive data. This separation allows for independent development and scalability of the client and server components.

Layered

There is no public information that proves that Trello has layered architecture, although we could assume it is, since popular and high demand applications are based on client-server layered architecture.

Stateless

Trello is stateless in the sense that each HTTP request from the client to the server must contain all the information needed to understand and process the request. The server does not retain any knowledge of previous requests.

Cacheable

Trello utilizes caching to improve performance and reduce the need for redundant data requests. For example, it may save login within cookies to create a session to keep the user logged in to make requests.

Uniform Interface

Trello represents resources as unique URLs. Each resource has a specific URL that can be accessed to perform operations on that resource, which are returned as JSON objects. Besides that, Trello uses standard HTTP methods (GET, POST, PUT, DELETE) to interact with resources.