

# MCSS App - System Design

Super Duper Waffle Team

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# CRC Cards

Admins	
<ul style="list-style-type: none"><li>• Knows its user name and password.</li><li>• Knows who made announcements.</li><li>• Knows who made events.</li></ul>	<ul style="list-style-type: none"><li>• events</li><li>• announcements</li></ul>

Announcements		Post
	<ul style="list-style-type: none"><li>• Admins</li></ul>	

Events		Post
<ul style="list-style-type: none"><li>• Has pictures</li></ul>	<ul style="list-style-type: none"><li>• Admins</li></ul>	

Abstract	Post		Announcement, Events
<ul style="list-style-type: none"><li>• Have a title</li><li>• Has an ID</li><li>• knows its posting date</li><li>• Has a body</li></ul>			

Past events	
<ul style="list-style-type: none"><li>• Knows it has photo(s)</li><li>• Knows its title</li></ul>	<ul style="list-style-type: none"><li>• Admins</li></ul>

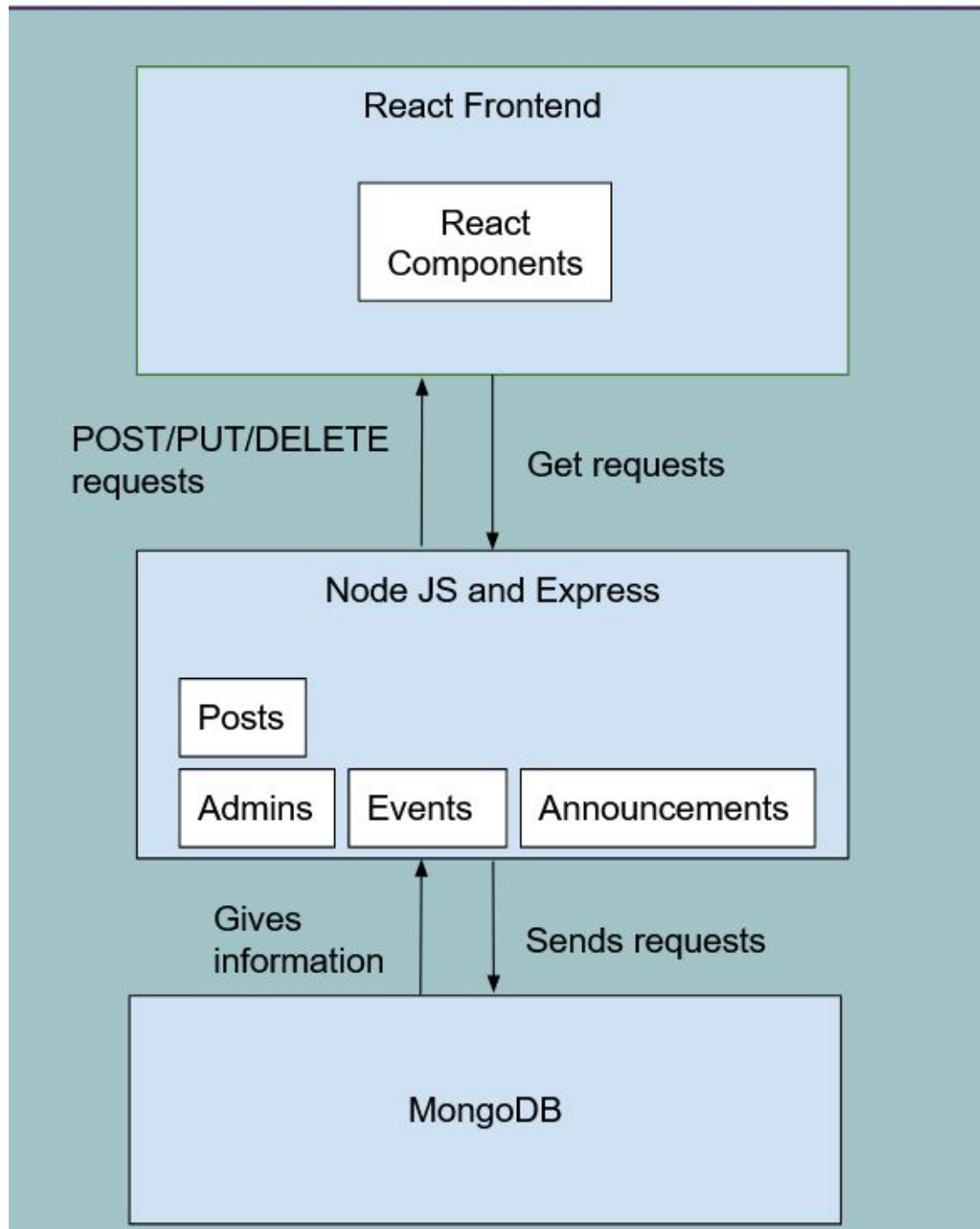
Interface DAO	
<ul style="list-style-type: none"><li>• Create a user, given username and password</li><li>• Get a user, given correct username and password.</li><li>• Create a post.</li><li>• Get a post given its identifier.</li></ul>	

# System Architecture Design

We plan on using Three-Tiered-Architecture to implement our product.

<https://www.ibm.com/cloud/learn/three-tier-architecture>

<https://www.mongodb.com/mern-stack>



# Strategy for dealing with errors and exceptional cases

**Admin login failure** - After a number of attempts of failing to login, the user will be locked out for a temporary amount of time.

**Form validation** - If an admin attempts to make a post, the post should not be empty or missing any required fields, otherwise they will get an error message.

**Attempting to access an invalid page** - If a user tries to access a page that does not exist or does not have the required permissions, they will be redirected to the home page or will see a 404 page.

**Database failure** - Fails to pull a request post or event, the page should express to the user that there was a failure to fetch from the database. Mongo will handle the recovery.

**Server failure** - If the server goes down, we want to have a solution such as Cloudflare which will be able to give users a cached page through our CDN. The executive will handle the solution.