**Discussion 3.1 – Router Guards**

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## Route Guards

Router guards are a way to control access to routes in a web application. They can be used to check permissions, authenticate users, or perform other tasks before allowing a user to navigate to a route.

There are different types of router guards, but some of the most common ones include:

* CanActivate guards are used to check if a user can activate a route. This is typically done by checking the user's permissions or authentication status.
* CanActivateChild guards are used to check if a user can activate a route's children. This is useful for preventing users from accessing certain pages or features, even if they have the permissions to access the parent route.
* CanDeactivate guards are used to check if a user can deactivate a route. This can be used to prevent users from leaving a page without completing a task, such as submitting a form.
* Resolve guards are used to fetch data before a route is activated. This can be useful for loading data that is needed to render the route's components.
* CanLoad guards are used to check if a user can load a lazy-loaded module. Lazy-loaded modules are modules that are not loaded until they are needed. This can be used to improve performance by only loading the modules that are actually used.

Router guards can be implemented in different ways, depending on the framework or library that is being used. However, the basic idea is the same: to provide a way to control access to routes in a web application.

Here are some examples of how router guards can be used:

* A shopping cart application might use a CanActivate guard to check if a user is logged in before allowing them to access the cart page.
* A social media application might use a CanActivateChild guard to prevent users from accessing private profiles.
* A blog application might use a CanDeactivate guard to prevent users from leaving a comment without saving it.
* A news application might use a Resolve guard to fetch the latest news articles before the home page is loaded.
* A game application might use a CanLoad guard to prevent users from loading a level that they have not yet unlocked.

Router guards are a powerful tool that can be used to improve the security and functionality of a web application. By understanding how they work, you can use them to create more secure and user-friendly applications.

Sources:

* Code Craft TV Routing Guards

<https://codecraft.tv/courses/angular/routing/router-guards/>