**Discussion Assignment 1.1 - Modules**

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WEB425 Angular with TypeScript

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**Angular Modules(NgModule)**

Angular Modules (NgModule) is a fundamental concept in Angular that facilitate the organization, reusability, and performance optimization of applications. In this post, we will see the purpose, usage, scope, popular modules, sharing through common modules, and implementation of lazy-loaded modules.

A NgModule acts as a container for related components, directives, pipes, and services. It allows us to group these elements together, creating a modular structure for our application. These modules can be combined with other modules to build a cohesive and scalable application.

The scope of a NgModule can be defined through the following aspects:

* Declarations: A list of declarable classes, components, directives, and pipes that belong to this module.
* Providers: A list of dependency-injection providers.
* Imports: A list of modules that should be folded into this module.
* Exports: A list of declarations — component, directive, and pipe classes.
* entryComponents: A list of components that can be dynamically loaded into the view.

Creating a shared module allows us to organize and share commonly used components, directives, and pipes. The CommonModule provides utility directives, and exports make shared elements available for other modules, improving code organization and reusability.

Lazy loading is a technique that optimizes load times by loading modules only when they are needed. This reduces the initial bundle size and improves the performance of the application. It is particularly useful for large applications with multiple routes.

Some popular Angular modules include BrowserModule for running apps in browsers, CommonModule for common directives, FormsModule for template-driven forms, RouterModule for implementing routing features, HttpClientModule for making HTTP requests, and more…

When creating a new Angular project, the default AppModule is generated in the app.module.ts file. It includes the necessary imports and declarations, such as BrowserModule, and serves as the root module of the application.

import { NgModule } from '@angular/core';

import { BrowserModule } from '@angular/platform-browser';

import { AppComponent } from './app.component';

@NgModule({

   declarations: [

      AppComponent

   ],

   imports: [

      BrowserModule

   ],

   providers: [],

   bootstrap: [AppComponent]

})

export class AppModule { }

By effectively using Angular Modules, organizing code into shared modules, and implementing lazy loading, we can create well-structured, reusable, and high-performing Angular applications.

**References**

Hoang, T. S. (2020, May 30). A complete guide to Angular Modules. Medium. <https://levelup.gitconnected.com/a-complete-guide-to-angular-modules-faf5a85e3e60>

Angular 4 - module. Tutorials Point. (n.d.). https://www.tutorialspoint.com/angular4/angular4\_module.htm