Experiment No.: 05

Title: Create a simple web app using angular.

Objectives:

1. To study different aspects of angular during building the web app.

Theory:

Angular is a JavaScript framework for building web applications and apps in JavaScript, html, and TypeScript, which is a superset of JavaScript. Angular provides built-in features for animation, http service, and materials which in turn has features such as auto-complete, navigation, toolbar, menus, etc. The code is written in TypeScript, which compiles to JavaScript and displays the same in the browser.

The basic building blocks of an Angular application are NgModules, which provide a compilation context for components. NgModules are containers for a cohesive block of code dedicated to an application domain, a workflow, or a closely related set of capabilities. They can contain components, service providers, and other code files whose scope is defined by the containing NgModule. They can import functionality that is exported from other NgModules, and export selected functionality for use by other NgModules. Every Angular app has at least one NgModule class, the root module, which is conventionally named AppModule and resides in a file named app.module.ts.

- Components define views, which are sets of screen elements that Angular can choose among and modify according to program logic and data.
- Components use services, which provide specific functionality not directly related to views. Service providers can be injected into components as dependencies, making the code modular, reusable, and efficient.

Both components and services are simply classes, with decorators that mark their type and provide metadata that tells Angular how to use them.

- The metadata for a component class associates it with a template that defines a view. A template combines ordinary HTML with Angular directives and binding markup that allow Angular to modify the HTML before rendering it for display.
- The metadata for a service class provides the information Angular needs to make it available to components through dependency injection (DI).

An app's components typically define many views, arranged hierarchically. Angular provides the Router service to help navigation paths among views. The router provides sophisticated in-browser navigational capabilities.

NgModule metadata-

An NgModule is defined by a class decorated with @NgModule(). The @NgModule() decorator is a function that takes a single metadata object, whose properties describe the module. The most important properties are as follows-

- **declarations**: The components, directives, and pipes that belong to this NgModule.
- **exports**: The subset of declarations that should be visible and usable in the component templates of other NgModules.
- **imports**: Other modules whose exported classes are needed by component templates declared in this NgModule.
- **providers**: Creators of services that this NgModule contributes to the global collection of services; they become accessible in all parts of the app.
- **bootstrap**: The main application view, called the root component, which hosts all other app views. Only the root NgModule should set the bootstrap property.

Key Concept: Angular,NgModule