**ASSIGNMENT NO. 9**

**TITLE**

Design and develop any web application using AngularJS.

**OBJECTIVES**

1. Understand the design of single-page applications and how AngularJS facilitates their development.

2. Properly separate the model, view, and controller layers of your application and implement those using AngularJS.

3. Master AngularJS expressions, filters, and scopes

4. Build Angular forms

5. Elegantly implement Ajax in your AngularJS applications

6. Write AngularJS directives

**PROBLEM STATEMENT**

Create an application for Bill Payment Record using AngularJS

**OUTCOMES**

1. Implement the effective client side implementation.

2. Solve the complex problem of development using MVC framework.

**SOFTWARE & HARDWARE REQUIREMENTS**

**Software’s:** Eclipse IDE/ Notepad/ Notepad++, Modern Web browser.

**THEORY-CONCEPT**

AngularJS is an open-source web application framework. It was initially created in 2009 by

MiskoHevery and Adam Abrons. It is presently kept up by Google. Its most recent adaptation is 1.2.21. "AngularJS is an auxiliary system for dynamic web applications. It gives you a chance to utilize HTML as your layout dialect and gives you a chance to stretch out HTML's linguistic structure to express your application parts plainly and compactly. Its information official and reliance infusion take out a significant part of the code you as of now need to compose. Also, everything occurs inside the program, making it a perfect band together with any server innovation".

**General Features**

* AngularJS is a productive system that can make Rich Internet Applications (RIA).
* AngularJS gives designers a choices to compose customer side applications utilizing JavaScript in a spotless Model View Controller (MVC) way.
* Applications written in AngularJS are cross-program agreeable. AngularJS consequently handles JavaScript code reasonable for every program.
* AngularJS is open source, totally free, and utilized by a great many engineers the world over. It is authorized under the Apache permit version2.0.
* By and large, AngularJS is a system to assemble expansive scale, elite, and simple tokeep up web applications.
* **Core Features:**



**Figure.: Architecture of AngularJS**

1. **Data-authoritative:** It is the programmed synchronization of information amongst model and view parts.

**2. Scope:** These are objects that allude to the model. They go about as paste amongst controller and view.

**3. Controller:** These are JavaScript capacities bound to a specific degree.

4. **Services:** AngularJS accompanies a few implicit administrations, for example, $http to make a XMLHttpRequests. These are singleton objects which are instantiated just once in application.

**5. Filters:** These select a subset of things from a cluster and restore another exhibit.

**6. Directives:** Directives are markers on DOM components, for example, components, characteristics, css, and that's only the tip of the iceberg. These can be utilized to make custom HTML labels that fill in as new, custom gadgets. AngularJS has worked in mandates, for example, ngBind, ngModel, and so on.

**7. Templates:** These are the rendered see with data from the controller and model. These can be a solitary record, (for example, index.html) or different perspectives in a single page utilizing partials.

**8. Routing:** It is idea of exchanging sees**.**

9. **Model View Whatever:** MVW is an outline design for isolating an application into various parts called Model, View, and Controller, each with unmistakable obligations. AngularJS does not actualize MVC in the conventional sense, yet rather something nearer to MVVM (Model-View-ViewModel). The Angular JS group alludes it cleverly as Model View Whatever.

10. **Deep Linking:** Deep connecting permits to encode the condition of use in the URL with the goal that it can be bookmarked. The application would then be able to be reestablished from the URL to a similar state.

11. **Dependency Injection:** AngularJS has a worked in reliance infusion subsystem that encourages the designer to make, comprehend, and test the applications effectively.

**Advantages of AngularJS**

* It gives the ability to make Single Page Application in a spotless and viable way.
* It gives information restricting ability to HTML. Along these lines, it gives client a rich and responsive experience.
* AngularJS code is unit testable.
* AngularJS utilizations reliance infusion and make utilization of partition of concerns.
* AngularJS gives reusable segments.
* With AngularJS, the engineers can accomplish greater usefulness with short code.
* In AngularJS, sees are unadulterated html pages, and controllers written in JavaScript do the business handling.

**CONCLUSION/ANALYSIS:**

With the help of this assignment it is helpful to understand features of AngularJS. MVC model structure and its use in advanced web programming is studied.

**ORAL QUESTIONS**

1. What is AngularJS and what are some of its advantages?

2. What is the Model View Controller (MVC)?

3. What is data binding in AngularJS? How does it relate to the MVC architecture?

4. Explain the concept of scope. How does scope inheritance work in AngularJS?

5. Explain the difference between a factory and a service in AngularJS.

6. Explain why there are two “destroy” events associated with the termination of a scope in

AngularJS.

7. What is dependency injection and how does it work?

8. What are directives? Can you explain the functions of the following directives?

9. Explain the role of $routeProvider in AngularJS.