Angular Web Application

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Abstract—

Web development is like building a house. Just as we need a system, city building permit and license, web development also requires documentation, proper server, structure and programming language. From ever-changing web design levels to the complexity of technology required, frameworks have become an integral part of developing web websites or applications. It does not make sense to rename a wheel, thus designing rich and attractive websites, it makes more sense to use frames authorized by developers around the world. Django, Angular, Spring, React, Vue, Express are some of the most popular web development frames. In my project I used Angular.

Introduction

The name of our project is "New Hub". It is a web application architecture using Angular online business. Fresh-hub is an e-commerce app, similar to apps like Goffers or Big basket.

It uses angular as front end and firebase as rear end. It also uses the firestone as a database.

The aim of this project was to build a malicious web application and demonstrate Angular performance in web development.

Angular can be understood as an open source framework used for web development in the beginning. Based on the Typescript framework. Improved web development means that Angular can be used to improve advanced web space. Saying that

Angular is a supported Typescript, which states that Typescript is the primary language used in Angular. Typescript is a good set of JavaScript means that any JavaScript code is also a valid type code. As the currently used browsers do not see Typescript, so during compilation, the text is changed or converted to older.

JavaScript. Typescript is used as it offers many more features compared to standard JavaScript. It not only supports object-based editing features but also direct typing. This means that unlike standard JavaScript, Typescript allows developers to apply features of a specific program to Angular projects.
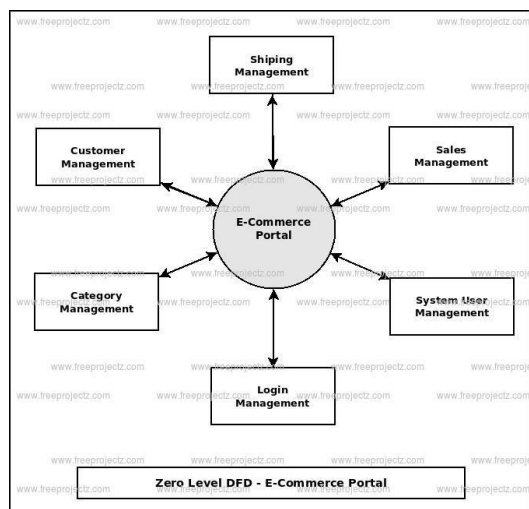
fig-1. Data flow diagram

II. Related Work

A. Development of Web Pages

Present's business networks started in 1990. In the late 1990s, Tim Berners-Lee created simpler standards for the global web and more web-based tools. Those tools include Hyper Text Transfer Protocol (HTTP), Hyper Text Markup Language (HTML), the first net browser and code editor, first web server, andThe first web page that describes a new era, the world's largest internet and how to improve a personal webpage. Since 1990, the Internet was rapidly emerging, and the development of its development could be explained by four generations. The first-generation web pages are still standing, and now they are not always updated, and customers should read better online content. The policy motto turned into a very simple web exploration. All theme pages are written in HTML and the chat protocol becomes HTTP. The second generation technology started in 2004, and the phrases that make it possible for more social networks, blogs, opportunities to expand the content of an online page, and user development enjoy browsing the virtual network connection. In all that time, well-known social networking sites such as facebook, Twitter, LinkedIn, and more have been found. Those social networks have enabled users to connect with users around the world. And at the same time, new technologies, such as JavaScript, Document Object Model (DOM), Ajax, Cascading Style Sheets (CSS), eXtensible HTML (XHTML), eXtensible Markup Language (XML), appeared. , eXtensible Stylesheet Language (XSL), and Flash that allows the delivery and delivery of web services, without problems with web distribution. The third generation of the web started in 2010, and was marked by a semantic web (add semantics to the web), personal content, intelligent search, and computer-generated creative ability to create a variety of content. Ontologies are used to represent meaning and thought. In addition to ontologies, the technology is also used on third-party web Application Framework (RDF), Web Language Ontology (OWL), and more. In the 4th generation, people can call Internet 4.0 with a working web. In the current web of 3.0, the use of search engines is still important, and that gives us information, in its major web content programs, that we can use according to our needs. Web 4.0 will be different. Once fully developed, it will not have the few steps required when using web 3.0, this way its use can be straightforward and unobtrusive.

B. Design Stages of Web Pages

Design is a language that is found all over the world in the visual world, and web design refers to the user interface of a web page. The main point and goal of the design is to focus on focus, so that users can easily find and use web content [5]. Because of various technological changes and Trends, web

design has caanda a lot, from first web generation web page which showed contents using a simrle textual web page, through a cont , and finally headed for today's simple and accurate web design. Web image design should always be modern and have improved text.

III. Methodology

Web application setup using Angular. The web application is built using the Angular stack using the Firebase database. Chrome developer tools used during testing using regenerative devices for reproduction.

The accompanying section examines the application components and their implementation.

Angular

Released in September 2016, 'Angular2' or 'Angular 2+' is commonly referred to as Angular. Angular version changes and completes rewrite of AngularJS 1.x frames. As much more complex than Angular1, Angular uses ES2015 and ES2016 over 'Typescript' as compiler, supporting classes and loading modules. When it was first introduced, Angular was seen as a major turning point in its era, when ES6 was nearing suspension and data for two-way commitment was required in form application data. Although Angular requires a great deal of effort required to set up a development project instead of React, it is appropriate as it provides a clear understanding of how the components work together.

In order to overcome the shortcomings of AngularJS, a key team at Google decided to move from the Model View Controller (MVC) building used in AngularJS to the construction of component structures. The

part is a graphic command. The section includes template file (HTML), style file (CSS) and text file. Angular is a framework based on writing text. Typescript is basically a superset of ECMAScript6 (ES6) which is the standard for textual language specification. In other words, Typescript is a JavaScript superset. This, in turn, makes the text have all the features of JavaScript (ES5) and the latest features provided by ES6 such as lambda operators and iterators. Another major change used in the new Angular framework was the installation of a visual connector for the command line commonly known as CLI. This was a renaming that made the lives of leading programmers much easier
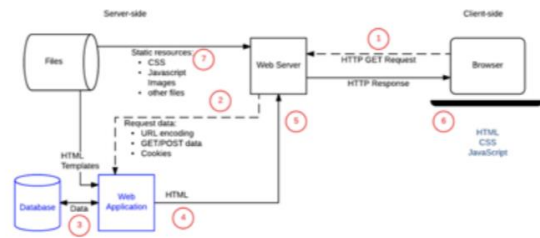

Fig -1: Client Side- Server Side Request and Response Cycle[2]

Fig 2. Response request cycle

B. Firebase

Firebase can be described as a background for developing not only web applications but also ios and android apps. Provides real-time data information, provides various application platforms or APIs, supports multiple types of hosting and authentication platforms. All firebase users receive live updates after all changes as a real-time website [7]. For authentication purposes, users can use anonymous passwords or other public

authentication can also be used. The host includes the use of applications via a secure connection to Firebase servers. Firebase limit that can support up to 50 connections and 100MB of storage.

Firestore is a flexible and uncontrollable SQL website. It can be used to store and synchronize client data with server side upgrades. Like Firebase, Firestore provides real-time data information by syncing real-time data to a client application. Not only that, but it also has the provision of offline support on both the web and mobile so that developers can build responsive applications regardless of network availability.
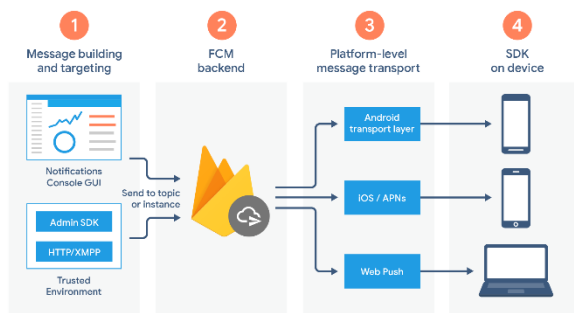

Fig 3. Firebase request flow

C. Angular CLI

The angular command line link makes the start of the Angular project easier. Angular CLI contains instructions that help developers to develop and get started on their project faster. Installation must be done worldwide otherwise it will be downloaded from the current directory. The use of Angular CLI in the development of Angular applications is recommended as it saves time as the installation and configuration of all the dependencies required and connecting everything up is not necessary in the event of a CLI.
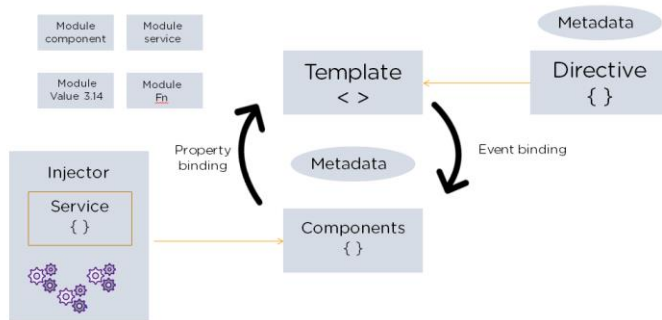
D. Bootstrap

Bootstrap is a well-designed, natural and powerful front frame. It makes web development easier by using HTML, CSS and JavaScript easily. Bootstrap Responsive CSS is suitable for all screen sizes from desktop to mobile. Bootstrap has some global CSS features, enhanced HTML elements with the use of growing classes and an improved grid system. Contains a number of reusable features for downloads, transitions, pop-ups, thumbnails and more. Bootstrap comes with a variety of customizations

jQuery plugins which can easily be included and used

E. jQuery

JQuery is a cross platform, enhanced with features, a small but fast JavaScript-based library. Designed to simplify HTML text on the client side. JQuery makes animation, event management, and document maturity very easy and easy to use on various types of web browsers. 10 The most important function of jQuery is to make the application of JavaScript easier, so that websites can be made more attractive and engaging without much hassle. It works with the principle of "Write less, do more" because most common jobs that consume many JavaScript codecs are taken by jQuery which incorporates those lines of code into tasks that can be requested whenever just one line is required. of code

Fig 4. Angular architecture

IV. Results and Discussion

The current work of the e-commerce web application development project has been completed using the Angular stack development. This business plans to provide basic research on key texts in the web-based information field and to highlight key aspects of the approach we have used throughout this process. This business has found out how you can understand the various issues that arise during web design. We've learned that web applications are not the only straightforward editing tools. Master basic design / stack to launch any web application is required. Focus on other challenges from the entire development cycle. These are the first and most important steps that will ensure that the ultimate web application, will be created for the needs of the market and will be tailored to the needs of its customer. Further testing of which highlights was given to editing devices for testing. All important decisions are made on how the site will be built based on the results of the case evaluation phase as they play an important role in articulating the specific needs of the web application client.

V. Future Scope

Currently, the current e-commerce web application aims to provide a basic writing essentials for the online business sector and in addition to highlight the key components of the process that have been used throughout the project. Further reviews and insights into new developments in addition new frameworks and testing tools will help the web application to improve and perform better. In the future, web development using a variety of new tools and tools could be useful for many organizations in India as well as the rest of the world, as they create a digital platform and provide ease of doing business around the world.

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