

Data Load Management using Angular JS

Mathew Sabu¹, Inderpal Singh Viridi², Rohit Sapkal³, Harshjyot Singh Chawla⁴, Vishal Tiwari⁵
^{1,2,3,4}Student, Department of Information Technology, St. Vincent Pallotti College of Engg., Nagpur, India
⁵Professor, Department of Information Technology, St. Vincent Pallotti College of Engg., Nagpur, India

Abstract: Building Information Modelling (BIM) refers to an intelligent, model-based process that provides insight for creating and managing building and infrastructure project faster, more economical and more economically and with lesser environment impact. We aim to integrate the architectural, structural, mechanical, electrical and plumbing discipline by focusing on providing extensive design, analysis and visualization services leveraging Building Information Modelling (BIM) and associated technologies. We have created the admin panel, where it stores the user data. This admin panel shows the record of all the actions performed by the user and the analysis of the data it has received.

Keywords: Data Load Management, angular JS

1. Introduction

BIM Scoper is an easy to use app which can be used by professionals from the construction industry to visually layout the expectation of a project. BIM increases the speed of delivery and brings out the most cost-effective strategies. It also improves the productivity due to easy retrieval of information and also improves the visualization. This change has the potential to bring improved efficiencies and profitability to a construction sector. A significant change in how building is conceived. BIM allows the use of parametric 3D models to auto-generate traditional building documents. These models can be leveraged to introduce the dimension of time and cost which bring a plethora of information and experience to the project in a visually communicative way. By this project we aim to have a significant change in how buildings are conceived, designed, built and maintained. This change has the potential to bring improved efficiency and profitability to the construction sector. In this project, we have created the admin panel of the following project. There are four sections to this admin panel and they are: user table, workstation, log table and analytics. Every section has its own set of functionalities which would be explained later in the paper. For this project, we have made use of AngularJS. AngularJS is a JavaScript framework. It extends HTML attributes with directives and binds data to HTML with expressions.

2. Types of classification

Four types of classification are there to our project and they are: user table, workspace, log table and analytics. User Table is based on the idea that it keeps track of the user data. It has following contents to it, and they are: name- this shows the

name of the valid user, date- shows the date on which the user had logged in, email- it shows you the email id of the following user, phone number- it shows the phone number of the following user, last active- it shows when was the following user was last active, email verified- it shows whether the following user has verified its email id or not, beta user- it shows whether the following user is a beta user or not, API Hits- it shows how many api has the following user had used, location- it shows the location of the user from it had last hit the API.

Workspace Table is based on the idea that it keeps track of the workspace data. It has following contents to it, and they are: Workspace name- this shows the name of the workspace of the valid user, No. of projects- shows the number of projects under a particular user, No. of owners- it shows the number of users own a particular project, No. of Admins- it shows the number of user have access to the workspace, No. of member- it shows the number of member under a project, Last Active- it shows when was the following user was last active, Active modules list- it shows how many modules are there under a particular workspace, API hits- it shows how many api has the following user had used, Created date- it shows when the workspace was created .

Logs Table is where it keeps track of every action done in the application. It has following contents to it, and they are: logID- it is unique number given to every action done in the application, user email- it stores the email of person who has committed the action, date- its stores the date of when the action was performed, path- it shows which which portion of the application was accessed, method- in this it shows which type of method was used (there are three methods here: GET, POST, PUT), secure- it shows whether the action performed was secure or not (green color refers to secure action and red color refers to not secure action), meta request- it opens a pop up where is shows the data in the json format, response code- there is status code set for every action that has been performed, response content- it opens up a dialog box where it shows the response of action performed in json format, response status- it shows green color if the response code is 200 (success) otherwise it shows the red color, error code- it shows the error number if ever there is an error in the action performed, error message- it shows the detail of the error that has occurred in the action of the application, request body- it shows the id of all category that has been accessed during the action of the process,

query log- it keep track of the sql queries that has been accessed during the action of the application, number of queries- it shows the number of queries that has been accessed during the process of application.

Statistics is where it shows the data analysis of the data which has to be represented in the application. The following are the analytics which we use in the application and they are: Number of Users- it shows analysis of how many user have been logged in a particular range of dates and we can also adjust the range of dates according to our needs and analysis of those changed dates is done automatically, Number of Projects- it shows the analysis of how many projects have been accessed at a particular range of dates and here we can also see the count of projects accessed in each date. Here also we can the range of dates according to our requirements, LOI Category Selection- it shows the analysis of various LOI category and the number selections that has been made for each category, LOD Category Selection- it shows the analysis of LOD categories and they're of selections that has been made for each category.

3. Literature survey

In this author [1] have proposed that AngularJS is a popular JavaScript framework based on the model-view-controller pattern to construct single-page web apps. Researchers surveyed 95 professional developers regarding the performance problems of AngularJS applications. They determined the common practices the developers followed to avoid the problems (for example, using third-party or custom components), the problems' general causes (for example, inadequate application architectures), and the problems' technical causes (for example, unnecessary processing in the digest cycle, which is the internal computation that automatically updates the view with changes detected in the model). In this author [2] have proposed that Json-GUI is an AngularJS front-end module that dynamically generates form-based web interfaces. Starting from a formal JSON configuration object describing a list of inputs, Json-GUI is able to build a form frame interface at runtime, with standard and personalized validation rules, giving the possibility to define constraints between input fields. Validated data are stored as Json objects or text files. Json-GUI has been exploited by scientific communities to effectively reduce the development and maintenance of customized user interfaces in science gateways. Moreover, Json-GUI can also be employed in the development of general-purpose Web forms. In this author [3] have proposed that AngularJS is a popular framework for single page web applications. In AngularJS applications, the programming logic is implemented in JavaScript, while the layout is defined separately in HTML files. Due to this separation, data and control flow is usually hard to track. We propose a method to visualize the data and control flow in AngularJS-based single page web applications and separate interactions from each other. Our method helps to get a better understanding of the application's work flow, to realize the

boundaries of the interactions, and to know what is updated in an inter-action and what is not. In this author [4] have proposed that There are many social enterprises that use e-commerce in running their business, Emcekaqu is one of them. It wants to change hygiene and sanitation behaviors by building a non-subsidized latrine. This achieved by selling local products to people in the city. E-commerce becomes a solution to maximize the usability of the web as a media transaction. Frontend systems are built using AngularJS framework and backend systems are built using the RESTful API. System test is done using user acceptance test that has two stages, are alpha testing and beta testing. The testing technique is black box testing. In addition, application responsiveness testing is also done to prove that the web is accessible from multiple platforms. Based on the tests, functional system is running in accordance with business processes. In this author [5] have proposed that AngularJS, the new JavaScript framework, with wide usage across web browsers and great expression power, comes with a shortcoming - lack of compiler optimization. Consequently, it is strongly recommended that every application written in JavaScript, regardless of the used framework, should include tests that validate both its behaviour and performance. This paper presents and evaluates two popular web automation testing frameworks: Protractor and Karma. As an addition to the description of testing frameworks in this paper, we present the results of running tests on optimized and unoptimized web application used in real systems.

4. Working

The first step to enter the admin panel dashboard is to have a registered email id. If a person has a register email id then he/she has to enter the correct password to enter the admin panel dashboard. If the person does not have the registered email id and correct password then he/she can't enter the admin panel dashboard. After typing the registered email id and correct password the person has entered the admin panel dashboard. After entering the admin panel dashboard, the person can go to four pages namely User Table, Workspace Table, Logs Table and Statistics. From Workspace Table the person can also goes to Workspace Dashboard. After completing the work in the four pages respectively the person can go back to the admin panel dashboard.

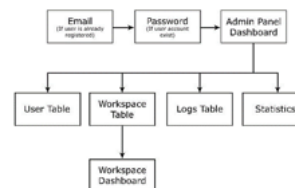


Fig. 1. Admin panel architecture

5. Conclusion

The main objective of the project was to develop an admin panel for an application, which would show the user activity of any user who has logged into the application and it would also

provide the analysis of those user data. Hence, the admin panel of the application was completed by the data load management method using Angular JS.

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