Customizable marketplace template

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Abstract - Current trend in the Ecommerce space coupled with marketplace business models is transforming the consumer experience and shifting traditional business models. This trend will continue to dominate as the internet penetration increases, especially in emerging countries such as India. We will be developing an online market place template using the most recent MEAN framework, which can be tailored with ease to meet several marketplace requirements (e.g. healthcare, retail, agriculture, etc.). Existing marketplace web portals are absolutely different from each other even though there arise the common features like the buyer, seller and the service moving in between them. This project is all about building the generalized template which minimizes the developers' task and also provides the required portal which binds the buyer and seller of the proposed marketplace.

Keywords - MEAN Stack framework, Marketplace, Template

I. INTRODUCTION

The increase in the impact of the internet has made the world to get developed more and more vigorously which led to the enhancement in the field of web portals too. The E-Commerce websites and web portals came into existence in the late 20th century. Since then the people are also very much interested towards the development as it saves the people's time and in turn money. A similar kind of growth is seen in India as well, as the people are keen towards the development which places the people in the profit end.

For this purpose, the developers are developing the portals separately for different fields. There is no relation or link between the portals even though there exist the common fields, common attributes, common dependencies between the different portals. In other words, there exists buyer, seller and some service moving between them, like the buyer would like to buy or would like to get the service provided by the seller and the service might be some product or some other kind of business flow. But in the development side, there is no such common things or common portal upon which the various marketplaces could be built.

Building web portals for the marketplaces like job recruitment portal, stock exchange portals, e-commerce, health care, gaming portals, agriculture portals, logistics, transportation portals, restaurant portals etc. is very important these days as the internet penetration is increasing day by day in the country.

So this project aims at building the generic template through which different marketplaces could be developed with minimum number of changes through the appropriate parameters.

The rest of the paper is organized as follows – Section II presents some of the related work. In section III, the unique functionalities of customizable marketplace template are explained in detail. Subsequently, the working of customizable marketplace template is discussed in Section IV. Finally, Section V concludes the work of this paper.

II. RELATED WORK

During our initial research, we came across this IEEE paper on Customizable online application development environment and an online marketplace system.

This paper proposed the development of online application for the marketplace which is customized according to the user of the portal. The system was proposed to build the portal through the existing conventional technology WAMP which is not developer friendly and supports the minimum

reusability of the developed function block in the project. Even though it is proposed to build a customized marketplace, it does not take care to build a generalized template for the marketplace in the online sector.

According to this paper, the development has been done only with respect to the customized marketplace but neither as a template nor as a parameterized portal upon which the development of the online portals could be done easily for various other fields.

They applied development resource virtualization technology in order to support multiple developers who create application with each customized development environment.

III. MARKETPLACE TEMPLATE

This marketplace template stands apart from other online marketplaces. The following are the unique features.

    1. Template

This template gives the skeleton for the development of different marketplace web portals with minimum changes by giving to the template through parameters. It assists the developer while developing the portal.

    2. Responsive

The responsiveness is supported by the template which results in the portal getting adjusted for the different browser size or device screen size. This is achieved by using the responsive effect provided by Bootstrap.

    3. Scalability

The scalability of this marketplace template is such that it gets adjusted to various categories of marketplace portal development.

    4. MEAN Stack

The database that this marketplace template uses is Mongo DB which has a unique feature in which it provides auto sharding which helps in reducing the table size, as the size increases, through dividing into multiple tables. For the purpose frontend view designing, AngularJS has been used which provides many angular directives, angular modules, angular routes etc. AngularJS also provides code reducing feature in which the code size is reduced considerably that helps in reducing the portal size. The server side programming is taken care by programming in NodeJS.

IV. WORKING OF TEMPLATE

The template is basically a skeleton that could be used by the developers to reach out the development of specific marketplace web portal. The portal would consist of two kinds of users, buyer and seller of services or articles, and the service that moves in between them. These three parameters are common in all the marketplace portals. These are the basic foundation elements for the template development. Template would consist of distinguished user login pages and further pages. In other words, the template provides appropriate frontend pages for both buyer and seller as accordingly. The buyer could see pages related to the buying of the product or the services provided by the seller and vice versa for the seller.

The service between the buyer and seller is managed by the template through the database entries that are there in the MongoDB database. So the background linking happens through the MongoDB queries and server side programming language NodeJS and hence establishing the proper relationship between the buyer and seller.

The developer has to code for a specific portal only beyond this stage. In other words, the developer should write code only for the portal specific entities, that too through the parameters to the template, and thus the template gives the skeleton of the portal which is more than 50 percent of the entire portal code. This in fact reduces the coding task of the developer.
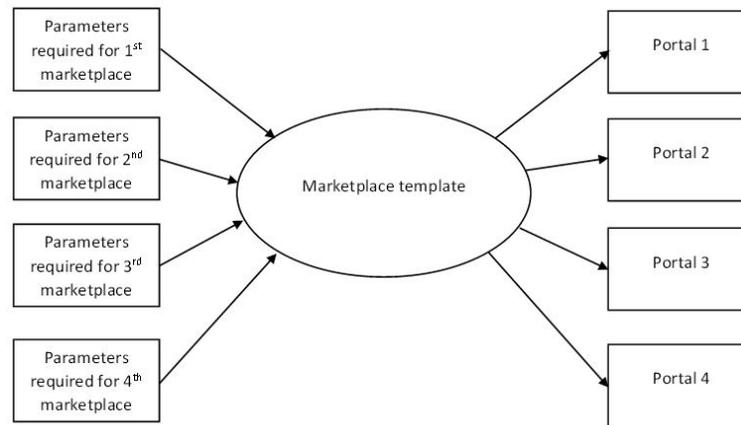
V. CONCLUSION

Different approaches for building marketplace portals were discussed. These days the number of internet users are increasing and so the online marketplaces. Also, the users use different kind of devices to visit such web applications. So the portal needs to be responsive. Since the number of required portals is increasing day by day, it is very much needed to build a template using the most recent technologies which would be handy in characteristic for the developer to build the applications and customize it according to the users' wish and requirements.

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