Interactive and Dynamic Application for Chef Booking Using Material Design and MEAN Stack (Amma'a Aroma)

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ABSTRACT: Amma's Aroma is an online platform connecting well-to-do urban people with professional or orthodox chefs that prepare food at consumer's homes. By analysing the demand in society, it was possible to develop an appropriate web application. The main goals are stimulating demand and provide employment in order to establish a successful business model. Further one can book a cook for cooking different cuisines in the favour of customer's choice , adding to this, Amma's Aroma cooks can also be booked to cook for grand events like marriages , birthday parties etc. As families are squeezed between the twin demands of work inside the home and outside, millions of children are being left alone and uncared for, with disastrous consequences for their love and their lives. This is mitigated when the cooking time is used to look after the kids while our cooks cook delicious food for the family. Whenever you go out to eat, wherever that may be, you are taking in an average of 200 more calories than if you eat at home, according to a paper published in the European Journal of Clinical Nutrition. This was also a major issue based on which our app was developed. The pricing for the cooks are nominal and will be affordable by almost all classes of the people. As of 2017, 51% of the world's population is on internet, The International Telecommunication Union estimated almost half of the world's population, would be online by the end of the year. This ensures a promising scope for this app.

KEYWORDS: Web Application, Automation, optimized, investment, Time saving, Chef booking

I. INTRODUCTION

Grocery shopping, meal planning and cooking is now considered a chore by a good proportion of the growing Indian middle class, causing a surge in demand for services that free them of such inconveniences[1]. Food technology is the flavour of the season for Indian start-ups. But contrary to popular opinion, it is not about IT but innovation in the food experience provided to the consumer using real food technology. It is not about fancy smart phone technology and apps but about breakthrough food technological process used to create innovative food products and experiences to the consumer.

Food industry may take the advantage of this functional ingredient having ever growing market. Consumer demand for healthy and nutraceutical food is the major motive for this growth. To use this nutraceutical ingredient in true sense the purity of this ingredient should be at high level. But with the culture of everyone in a home working, it makes the people to cut short their daily routines and rather starts to seek other methods to compensate their time allotted for their routines. Nowadays people don't find sufficient time to cook food indigenously in their homes, hence resolve to food ordering and eating in hotels.Researchers have examined the eating habits of residents in Singapore and found new evidence that a diet heavy in fast food increases the risk of developing Type 2 diabetes and coronary heart disease [2].The latest research, published online July 2 by the American Heart Association's journal Circulation, found that

people who consume fast food even once a week increase their risk of dying from coronary heart disease by 20% in comparison to people who avoid fast food.

Herein we are with a project which provides us with a capability to eat homemade indigenous food, without our daily routines and work getting compromised. It is a Web Application through which users can view chefs available in his locality and book them immediately. The chefs can be both professional chefs as well as other people in the user's locality who have registered as chefs with our project. By this way it creates part-time and full-time employment for many people and home makers.

II. LITERATURE REVIEW

In this modern world where everyone has started to thread their way in their own paths, time management and balancing between work and life routines has become major problem in a developing family. Due to that there is no time for food management or cooking in a daily routine.Hence, the trend is moving towards hotels and food ordering for daily foods. When speaking of food ordering, even though we get vibrant range of choices and hotels to choose from, the end point always comes to them being made in hotels. Having hotel food occasionally or rarely does not affect our body much, but if taken regularly affects our body and is proven by researchers [2].

The existing system allows a user to book chef only for party and other occasions. Also he will be able to book only celebrity chefs, which comes with obviously a high cost.Like this after having some experiences with the current prevailing system we now are able to site out some of the defects underlying within it. Some of them are:-

a) Food ordering though has become a trend, regular intake of hotel foods from food ordering can lead to major diseases and could bring ill health

b) With the existing chef booking platforms, users can only book celebrity chefs whom are not affordable by a common man for booking. Also users cannot find better and affordable home chefs who are nearby to their location.

c) Also the existing system allows the user for booking chefs only for special occasions and party.

III. PROPOSED SYSTEM

The aim of our proposed system is to provide an application platform for booking nearby chefs and also to enable home makers be employed as part-time chefs for the users. This way the users don't have to depend on hotel foods and food ordering for their regular diet.

Amma's Aroma is a Web Application that works with the current emerging technology of cloud hosting and storage. It primarily developed on the MEAN Stack platform which comprises of Node js, Angular 7, Express js and MySQL integrated with nodemailer framework, google map apis and google's material framework. The application backend runs on node jsserver, frontend on angular server and express js acts as the middleware.
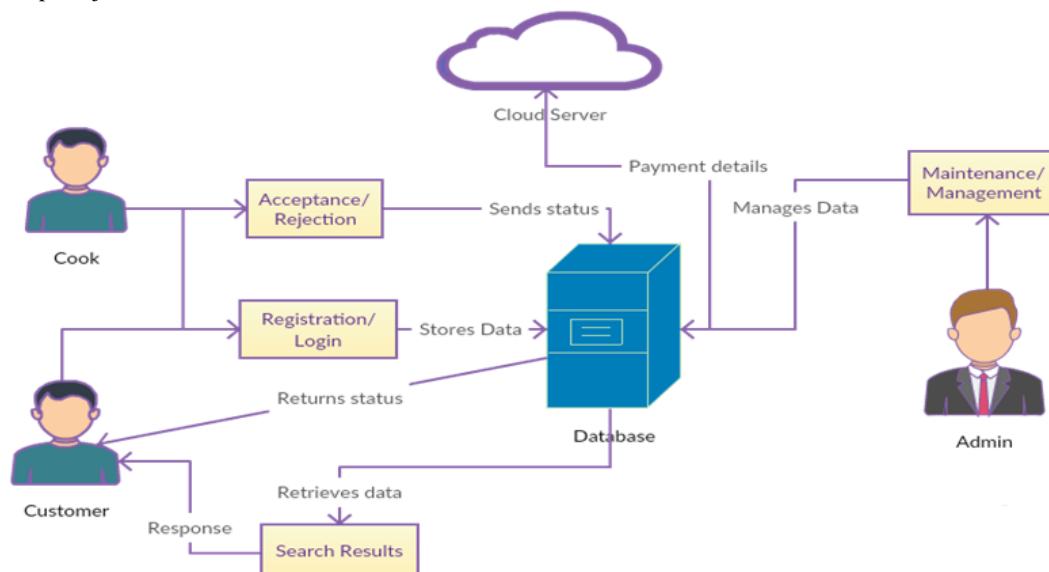

FIGURE 1: ARCHITECTURE DIAGRAM

Hence by using our proposed system individual chefs based on user's taste and affordable price can be booked for a temporary purpose. The proposed system is built on the latest technologies and is based on services and API's for communication.

The user can register with the application and book chefs who are available in his own region or locality. Once booked a secret confirmation key is generated for chef authorization to finish booking and mail confirmation is automatically sent to both the user and chef. For a chef to be available among the list of available chefs to the user, the chef has to register first and should be available in the same locality or the user. Payment can be done through cash or by using any well recognized wallets for payment. The chefs can be also booked for occasions like festivals, parties, functions etc.

IV. IMPLEMENTATION

The implementation of our project is done using node js, angular js and express js. Each of them is a variant of JavaScript and Typescript, which makes them more easy and versatile to implement. The primary modules in the project areLogin module, Registration module, Chef booking module, notification engine, Live tracking module, GPS module, Bookings view module, booking completion module. Each module has been divided into separate pages and components. Each page imports several components together and interacts with the backend database using services and routes.
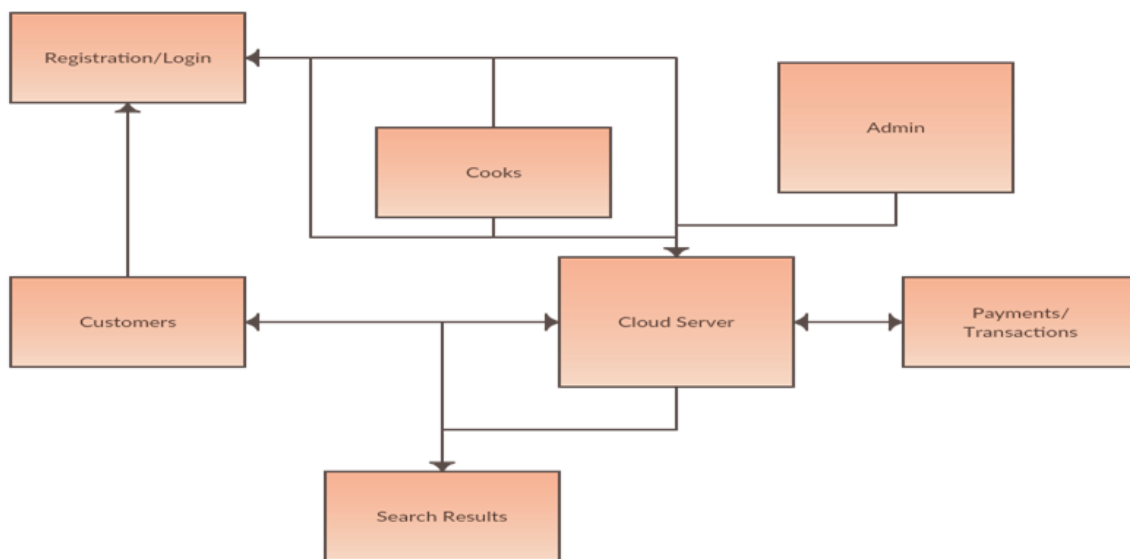

FIGURE 2: BLOCK DIAGRAM

When a user wants to book a chef immediately, the user has to first register in the application, and then he can login using his credentials. At the home screen of the application the user can view all the chefs who are available in his locality or region as cards. The chef card displays the chef's name, his total likes and dislikes and his region along with a button for booking. When the user clicks the book now button, the corresponding chef is booked. A Booking ID and a secret confirmation number is generated which is needed by the chef to complete his booking.
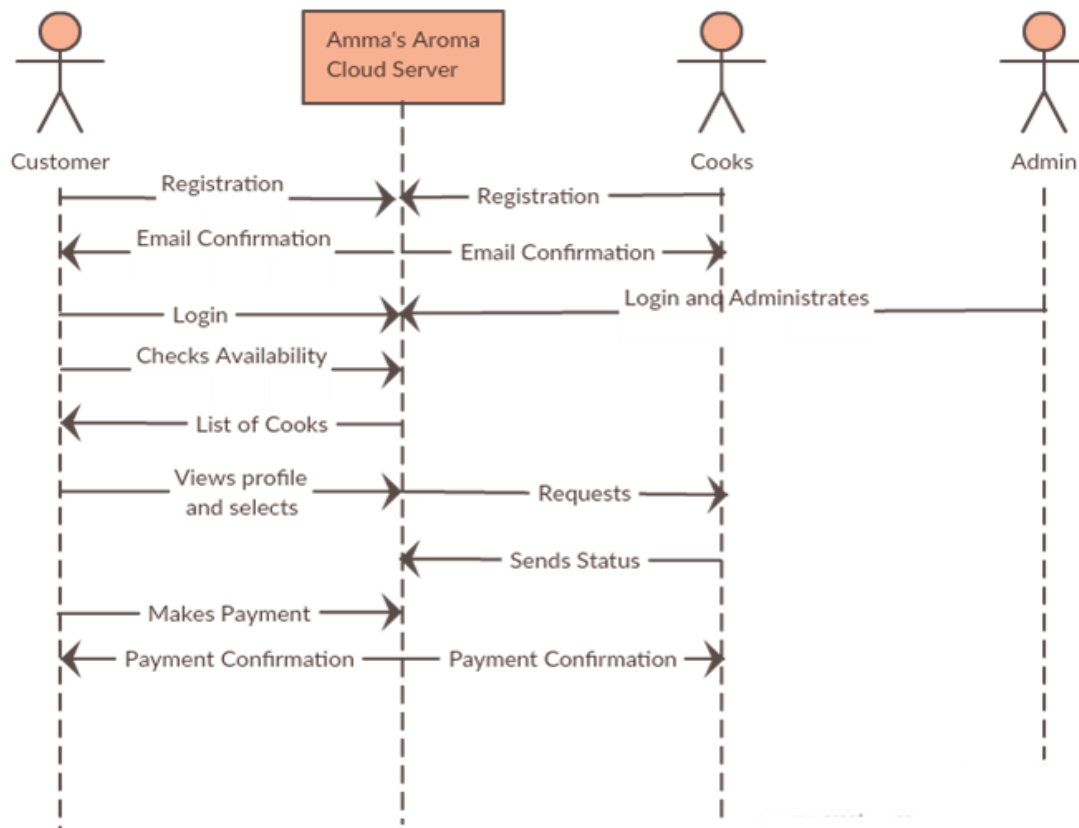
FIGURE 3: SEQUENCE DIAGRAM

The user can also view his previous bookings, give like or dislike for his previous booked chefs and view or edit his profile. The user has the rights to book chefs, view and edit his profile, view his previous bookings and give like or dislikes to his previous booked chefs. Once a booking purpose is completed the user has to delegate the secret confirmation number to the chef for completing the booking. Once booked the email service implemented using nodemailer framework is used to send confirmation emails with the contact details to both the user and the chef. Once the booking is successfully completed the user has to pay the chef as cash through a 3rd party wallet service or payment service like paytm, Google pay, amazon pay etc.
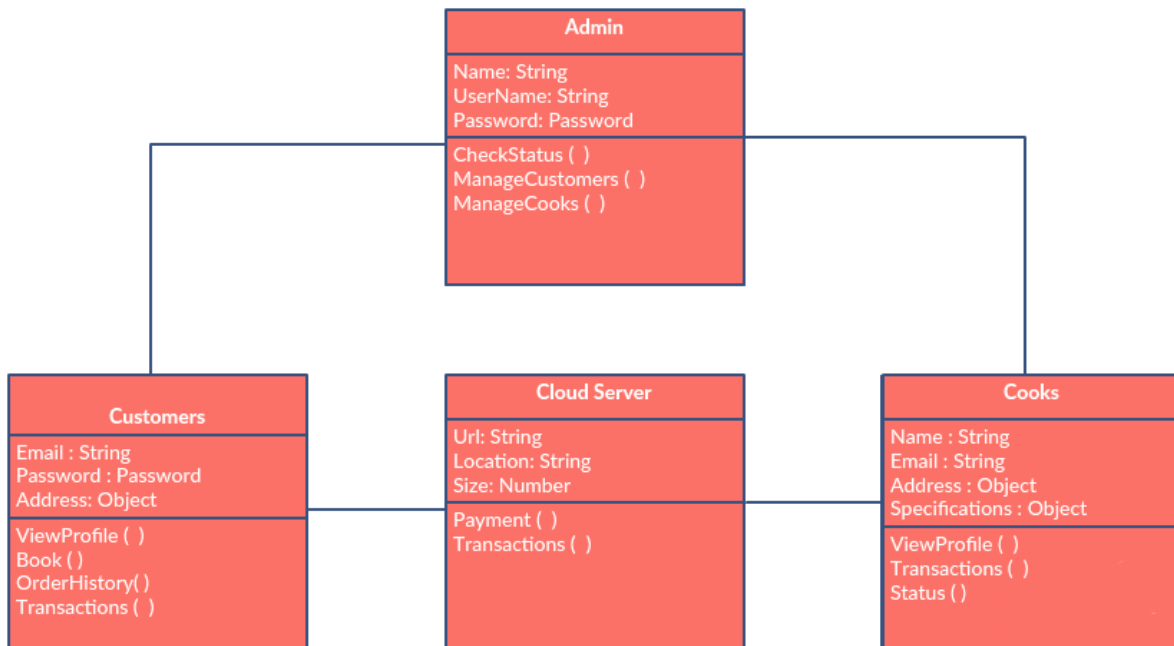
FIGURE 4: CLASS DIAGRAM

When a Home maker or a home cook wants to register with our service then he has to register in the application through the registration page. Once registered the chef can login into his account using his registered username and password. After login the chef can view his current boking in the home screen along with the user's name who booked the chef, the user's contact number, the user's address. The chef has to reach the users address and satisfy the purpose of the booking. When the chef wants to finish the booking, the chef has to get the secret confirmation key from the user and input it when asked by the application. Once done the chef has successfully completed his booking and user can issue like or dislike to the chef.

V. RESULTS

Since we used material design for front end, the pages contained the fluidic transitions and features. Regarding the backend, it was made to well perform using node js and express js as middleware. There was good scalability and load balancing between the services and controllers
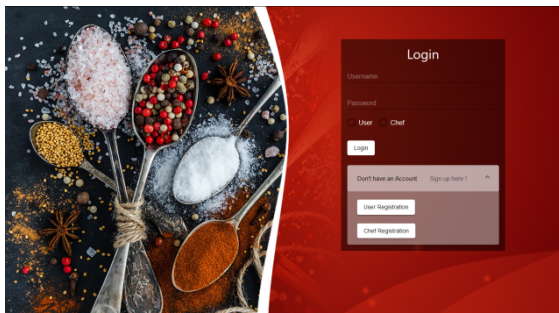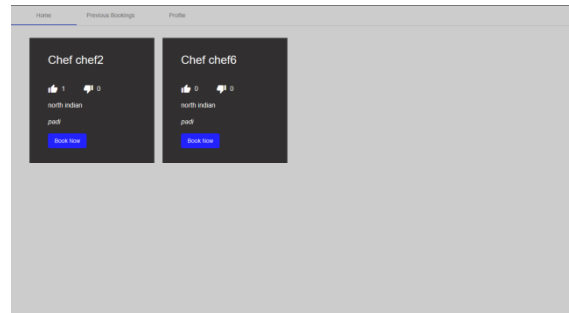
FIGURE 5: LOGIN PAGE

FIGURE 6: USER DASHBOARD PAGE

When the user first visits the project, the user has to either login if they already have an account, or else the user has to register first. If he is a chef/cook then he has to register as chef else he/she has to register user. When the user successfully logins he goes to the user dashboard and can see the current available chefs in his locality.The user can book chefs by pressing the book now button.

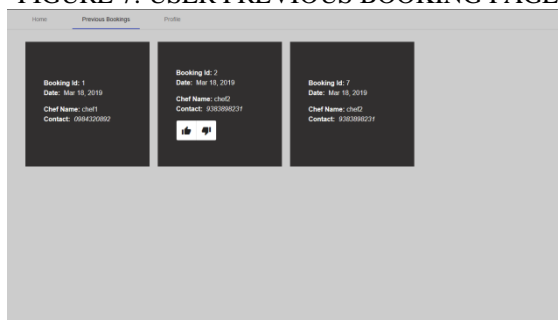FIGURE 7: USER PREVIOUS BOOKING PAGE

FIGURE 8: USER PROFILE PAGE

In the next tab to the Home tab is the previous bookings tab, in this tab the user can view his previous bookings and in the same page the user can give like or dislike for the previously booked chef. The next tab is the Profile tab. In this tab the user can view or edit his profile details and update it by clicking the update button.
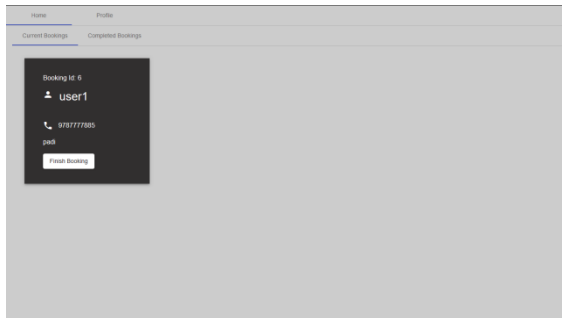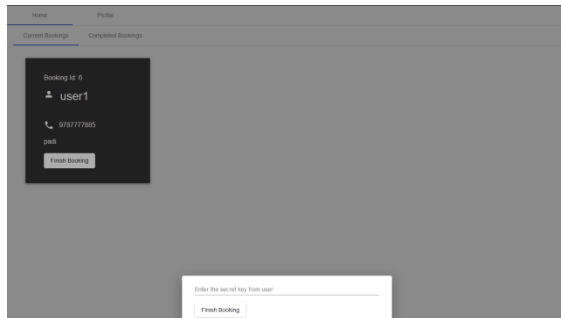
FIGURE 9: CHEF CURRENT BOOKINGS PAGE

FIGURE 10: CHEF FINISH BOOKING DIALOG

The login and registration procedure for the chef is the same as for the user but with little changes in the data received. Once the chef logins into his account, he can view his current booking.The other sub tab can show his completed bookings. The chef can complete his booking from the current booking card, by which he has to enter the secret confirmation key from the user.

VI. CONCLUSION

Urbanization and trend towards workaholics makes the regular people to compromise on their daily essential routines. Hence by implementing this project most people get benefited in different aspects. It provides as a solution for the people who compromise on their daily homemade food to hotels and food ordering platforms. Also it provides us with a capability to eat homemade indigenous food, made in their own houses with customizable tastes according to each users food preferences. This application provides a complete security over network for payments and related stuffs.

With this application comes the power to easily book chefs who can be both professional chefs as well as other people in the user's locality who have registered as chefs with our project. By this way it creates part-time and full-time employment for many people and home makers. This application build is future proof because it is built on latest platforms (MEAN Stack). Hence this project can make a big impact on the society in the long run, it will make many humans life free of diseases caused by eating fast foods and restaurant/hotel foods for a long time.

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