

# A STUDY AND IMPLEMENTATION OF FIREBASE NOTIFICATION USING CHEF'S RENT METHOD

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**Abstract:** Eating healthy is important for many reasons, it will promote intellectual development in children and adolescents prevent major health problems from developing and ensure a long and healthy life style. This research paper will introduce the importance of forming a healthy eating habit from a young age onto the senior years an attempt is made to concentrate on the health safety of the people who order food online. A hygiene food will be deliver to customer at a home this app is developing for smart phones using android as a platform. This app can be activated by clicking on the icon of the app whenever the user feels he\she is tired or the more people has arrived occasionally. Whenever the users start this application it will directly start to the find chef near me by using location Access server will get the information about their exact location of customer. After that server will send firebase notification to the available chef. This app having one more feature which chef can get a permanent job as well as using this application.

**Keywords:** A hygiene food, android as a platform, developing, firebase notification, customer, location.

## 1. Introduction

In today's world, it is not safe for anyone either they are men or women to travel and after reach at home they will have to cook food but they are tired so they order the food but they didn't get the actual taste of home-made food but this application will be the best help for them they can ask for a chef and get the better taste as well as hygiene food like at a home.

### What is FCM?

Firebase is a cloud services supplier and backend as a service company based in San Francisco, California. A special platform is provided by firebase for building mobile and web application. It can build application and update it in real time. Firebase is very easy and it stores data in JSON format. We do not need to configure our server when we use firebase. Everything will be handled by firebase automatically. So server side coding is not required. It will save time and will make us more productive. In this research paper we will simply explain how to use firebase for our android application. Obviously, both server side code and client side code is required for building a web-application. It requires a backend that handles a database to store the records, authentication to authenticate the identity of user accessing it, Ajax, an accessible API, and we need to host that backend somewhere. There are many technologies that make backend development an easy task like Ruby on Rails, or services like Heroku but a lot of development time is consumed during building these technologies. Most of the backend concerns are taken into account by the firebase and therefore it is taken as Backend as a Service (BaaS).

### How FCM works?

Firebase Cloud Messaging (FCM) is a cross-platform interactive application which lets you build your application on multiple platforms like android, iOS, tablet and many more, that allow you to deliver messages in more reliable manner at no cost. Using FCM, you can notify a client app that new email or other data is available to sync, all this is done in real time. FCM allows multiple parties to send -



An FCM implementation includes an app server that interacts with FCM via HTTP or XMPP protocol and a client app. You can compose and send messages using the app server or the notification console. Firebase Cloud Messaging allows us to build notification of firebase that shares the same software development kit for client development. For testing or for sending marketing or engagement messages with powerful built-in targeting and analytics, you can use Notifications. Firebase can update the data within nanoseconds.

### FCM Messages

Firestore Cloud Messaging (FCM) offers wide range of messaging solutions with advance options and newer capabilities. This section focuses on two types of services-Message type and Notification message. The Hypertext Transfer Protocol (HTTP) is an application layer protocol which is used for the secure communication over internet and between sender and receiver. Extensible Messaging and Presence Protocol (XMPP) is the open XML technology as well as protocol for communication between sender and receiver. X refers to extensible means it takes approach in defined way to grow and acquired the changes. M refers to piece of message you see. P refers to presence which is type of indicator use to tell the server that you are available or not. P refers to Protocol means set of rules that enables system to communicate with each other.

### Types of Messages

With FCM, you can send two types of messages to clients:

1. Notification messages, sometimes --thought of as "display messages."
2. Data messages, which are handled by the client app.

We can use Firestore Cloud Message for sending instant messages of up to 4KB in size.

### Notification messages

Notification messages are handled by firestore SDK itself. Typically the notification message contains title, message, icon etc., this message can be sent from firestore console UI. By sending this kind of messages, you won't get much control over the notification. The notification will be shown automatically when the app is in background.

For example, here is a JSON-formatted notification message in an IM app. The user can expect to see a message with the title "Portugal vs. Denmark" and text "great match!" on the device:

### Code Block

```
{
  "to" : "bk3RNwTe3H0:CI2k_HHwgIpoDKCIZvvDMEExUdFQ3P1...",
  "notification" : {
    "body" : "great match!",
    "title" : "Portugal vs. Denmark",
    "icon" : "my icon"
  }
}
```

When the app is running in the background and user is not currently using the app at that moment Notification messages are stored in the notification tray. And messages are handled by these callbacks:

1. `didReceiveRemoteNotification:` on iOS
2. `onMessageReceived()` on Android.

### Data Messages

Set the data key with your custom key-value pairs to send a data payload to the client app. Data messages can have a 4KB maximum payload.

For example, here is a JSON-formatted message in the same IM app as above, where the information is encapsulated in the data key and the client app is expected to interpret the content:

### Code Block

```
{
  "To" : "bk3RNwTe3H0:CI2k_HHwgIpoDKCIZvvDMExUdFQ3P1...", "data" : {
    "Nick" : "Mario", "body" : "great
    match!", "Room" : "PortugalVSDenmark"
  }
}
```

NOTE: We can't send Data messages using the firebase console. We need to use the REST Client or Server. On Android, a client app receives a data message in `onMessageReceived()` and can handle the key-value pairs accordingly. On Android, the data payload can be retrieved in the Intent used to launch your activity Real time .

*Database:* A schema less and cloud hosted database that is structured in Java Script Object Notation format. Authentication: Authentication in firebase provides a very good service of authenticating all the users without even using any client side coding.

*Cloud messaging:* Firebase cloud messaging allows messages to be delivered from any platform other than the one on which it is developed in a reliable manner.

*Storage:* Files can be uploaded and downloaded in a secure manner without being affected by network quality

*Hosting:* Firebase web applications can be statically hosted in a secure manner in a very fast and quick manner.

*Remote config:* This feature allows to update the user application without the need of deploying the current updated app.

*Test lab:* It involves testing of applications with different configurations and with variety of devices.

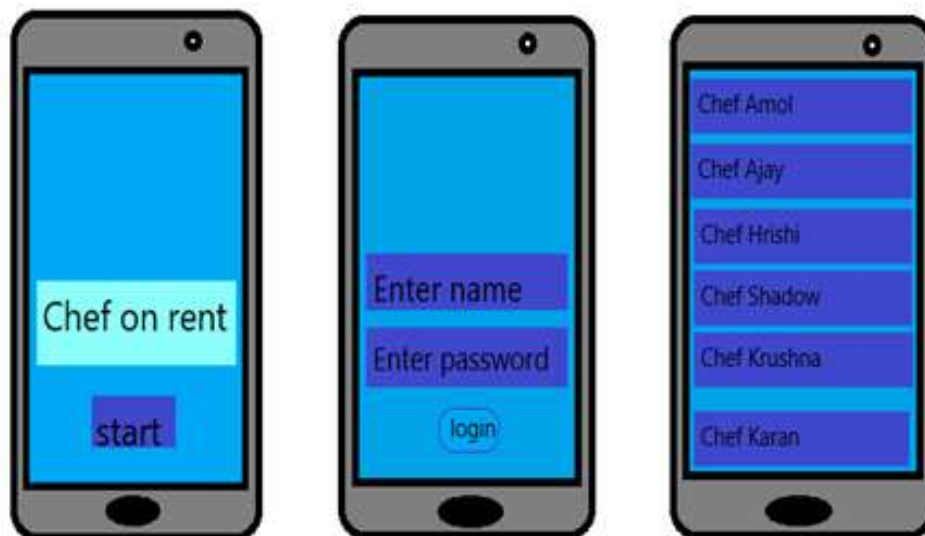
*Crash reporting:* This feature is used to prepare a report of all the app crashes and errors in application.

## 2. Literature Review

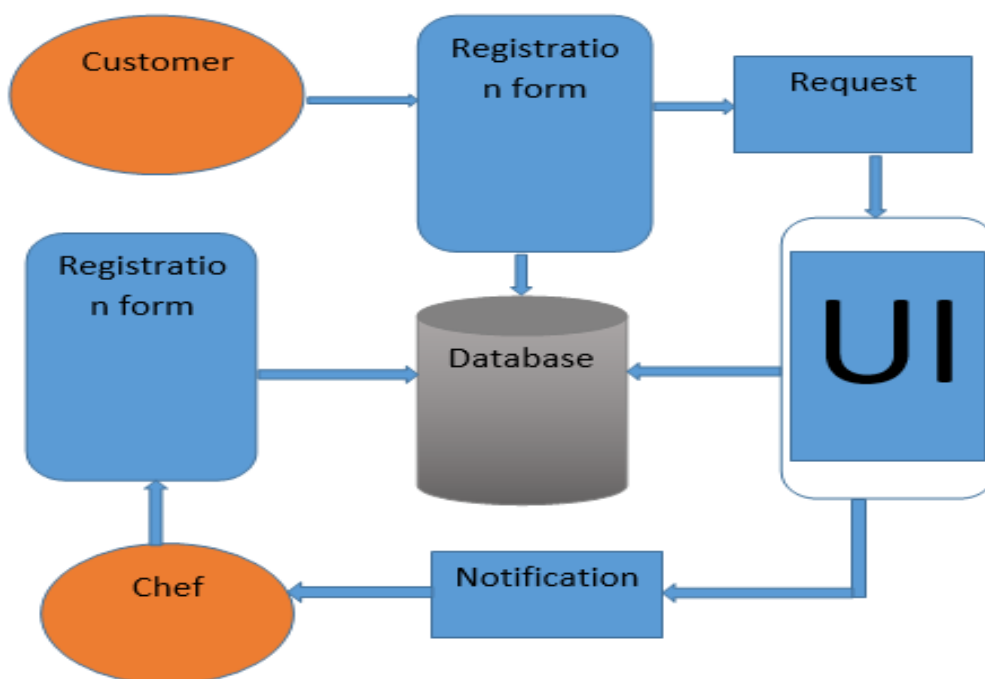
Our first target: to maintain categories and add subcategories to allow people to find what they were looking for more quickly.[1] Our second target was to subtly suggest popular dishes that were quick to prepare.[2] Less prep time meant faster deliveries and so we introduced Recommendations.[3] Every restaurant had unique categories to accommodate their menus. We added recommended dishes at the top of every tab, increasing the chances that people would select those. We included pictures for most of the dishes on the menu, especially for the recommended ones. After all, it's impossible to ignore both a grumbling stomach *and* a watering mouth. Cash on delivery is a convenient option for many, until it's impossible to find change for that thousand rupee note. We didn't want the customers running around for change so we included a check box in the design that informed the delivery personnel to carry change for the exact payable amount. Simplifying the situation for everyone! Developers are free to take advantage of the device hardware, access location information, run background services, set alarms, add notifications to the status bar, and much, much more. [6] Android Application Sandbox (AASandbox) which is able to perform both static and dynamic analysis on Android programs to automatically detect suspicious applications is also discussed. [7] Smart Phones has changed the life of everyone. Along with other features, an App in Smart Phones allows to do almost everything, from playing games to do business.[8] The development of app described in present paper has given a strong understanding of various challenges associated with design and development of apps[9]

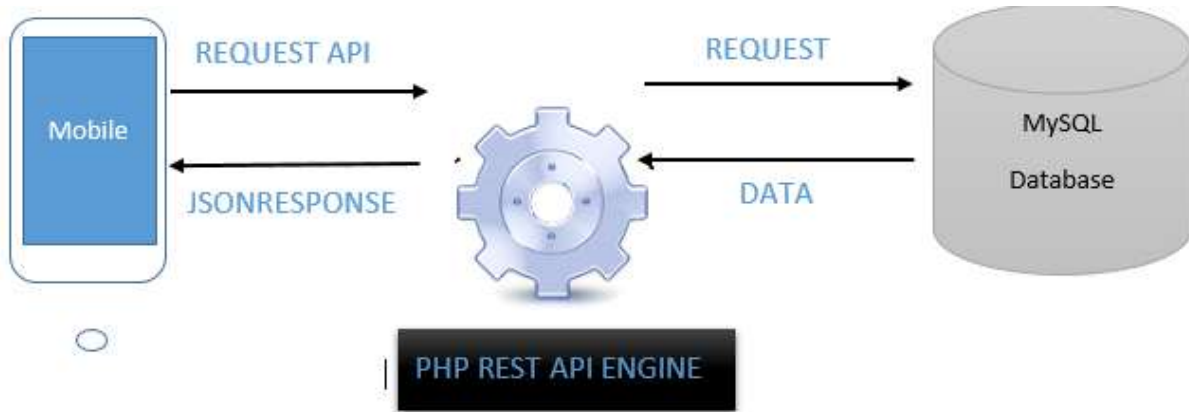
### 3. Working Architecture

#### User Interface



#### Data Flow Diagram



**Background Architecture: Client Server Architecture****4. Advantages**

1. Chefs can easily expand their business worldwide.
2. Customer has wide range of variety in choosing appropriate Chef as per his demands.
3. Chefs do not need to have personal contact with the customer.
4. Customer can directly communicate with the Chefs using the application itself.
5. Cost redemption like Travelling expenses and etc.
6. Customer can easily take Chefs on rent.
7. Start-up can be easy for new Chefs.

**5. Conclusion**

In this current situation Chefs faces lots of problems to start their own business like, competition in the business, Gathering customers, represent their business worldwide, and etc. This application comes with the solutions for above problems. By using this application Chefs can easily operate their business with an efficient way. This application will help many new Chefs to start their own business without any hesitation. In today's world, it is not safe for anyone either they are men or women to travel and after reach at home they will have to cook food but they are tired so they order the food but they didn't get the actual taste of home-made food but this application will be the best help for them they can ask for a chef and get the better taste as well as hygiene food like at a home.

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