Tiffin Management System Using Android App

A system to help manage orders and make delivery more efficient

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Abstract: **People tend to use tiffin service very often. The main customers of these services are students and employees who live in rented apartments. The subscription of this service changes a lot as it depends for how much time the customers want the tiffin to be delivered to them. A proper management is needed for the tiffin-vendor and the customers as well to cut off the everyday hassle. Every individual who uses the tiffin service has experienced many difficulties at some time trying to order the food or even while managing the payment for the same. As always people like hassle-free services and that made us think of this system. We aim to make it easier for all the customer users to order the tiffin and the tiffin-vendors to manage the process of order handling seamlessly. In this way it would help the vendors to utilize their time easily and also grow their business.**

Index Terms: **Tiffin management app, Admin for centralized management.**
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I. INTRODUCTION

The customers of all tiffin service need to contact their respective tiffin-vendors every day for informing about how many tiffins or maybe how much food is needed by them. Also it gets very difficult for the tiffin-vendors to manage the orders (regardless of regular customers). Sometimes in case of special requests from the customers, the vendors may forget or get off-track while keeping those requests in mind. The customers are very eager to know where the vendor currently is and what his status is. Thus our system tries to eradicate the problems faced by both the customers as well as the tiffin-vendors to provide hassle free service.

II. PROPOSED SYSTEM

The proposed system aims to provide a better communication between the customers and the vendors. The customer uses the app to place a tiffin order. But it is possible to place the order to a particular vendor provided the vendor's timer is not elapsed. The timer for a tiffin-vendor specifies the maximum time up to which orders can be made to that vendor. As soon as the timer is elapsed, the vendor then has a count of how much food and tiffins to prepare and where to deliver them. Thus the inclusion of a timer helps vendors get all their orders requested before a suitable time that is sufficient for them to prepare the food. Then the delivery process starts. It is important to note that the vendor must also have a track of all orders that are meant to be delivered in the same area as we are initially preparing the list of orders on the vendor's side as orders are made. The vendor then delivers the tiffin to the customer. The customer has the ability to track the vendor as to when and where he is. When the vendor delivers a particular tiffin successfully then it marks as the order is completed.

For paying the money for the tiffin, we must include payment modules for the same as well. Initially google pay and pay tm number of the vendors are provided in the app itself.

III. GOALS AND POTENTIAL BENEFITS

The app provides a way to manage the orders easily. Daily and monthly bills could be easily tracked by the user. Tracking helps to serve the customer with a potential reaching time of the vendor. Due to the inclusion of the above functionalities it helps to provide the service of the vendor to its customers efficiently. It helps the vendor too to manage and scale orders as and when required.

IV. EASE OF USE

The app is proposed to be made very lucid so that different age groups find no problem in using the app. It is also taken into consideration how fast new users can understand the working of our app.

V. MODULES OF THE PROPOSED SYSTEM

The proposed tiffin management system consists of the following modules: Customer module, Tiffin-vendor module, Delivery-boy module, Admin module.

Customer module

This module contains the functionalities that are to be delivered to the customer. To use the module the customer must login using his/her credentials or else register (in case of a first time user). It then shows up the tiffin-vendors and their respective menus. It is also used to login and authenticate for an existing customer. The customers can then place orders using this module. This module is made very responsive so that users can enjoy using it which adds up to the overall user-experience of the app. The customer is also able to track his order in this module. Bills can also be easily managed with the help of this module wherein a customer is able to pay

the bill at the time of ordering itself or he/she can order the tiffin for cash on delivery. It also helps to subscribe to a particular tiffin-vendor for a month whereby the customer may get a discount (as formulated by the tiffin-vendor).

Tiffin-vendor module

Notifying the vendor about the order that has been placed is the main purpose of this module. This module is used by the tiffin-vendor to manage general updates that he/she wants to give to all the customers that are viewing his/her section. This module helps the vendor to manage the orders once they are received. It sorts the orders according to the area that helps in delivering the orders optimally. It helps to make the order receiving stage for a limited time by maintaining a timer. After the timer elapses, the customer can no longer put on an order request to that particular tiffin-vendor. The login to the vendor module is done by strict credentials. These credentials are provided to the tiffin-vendors when they register to the admin for the service.
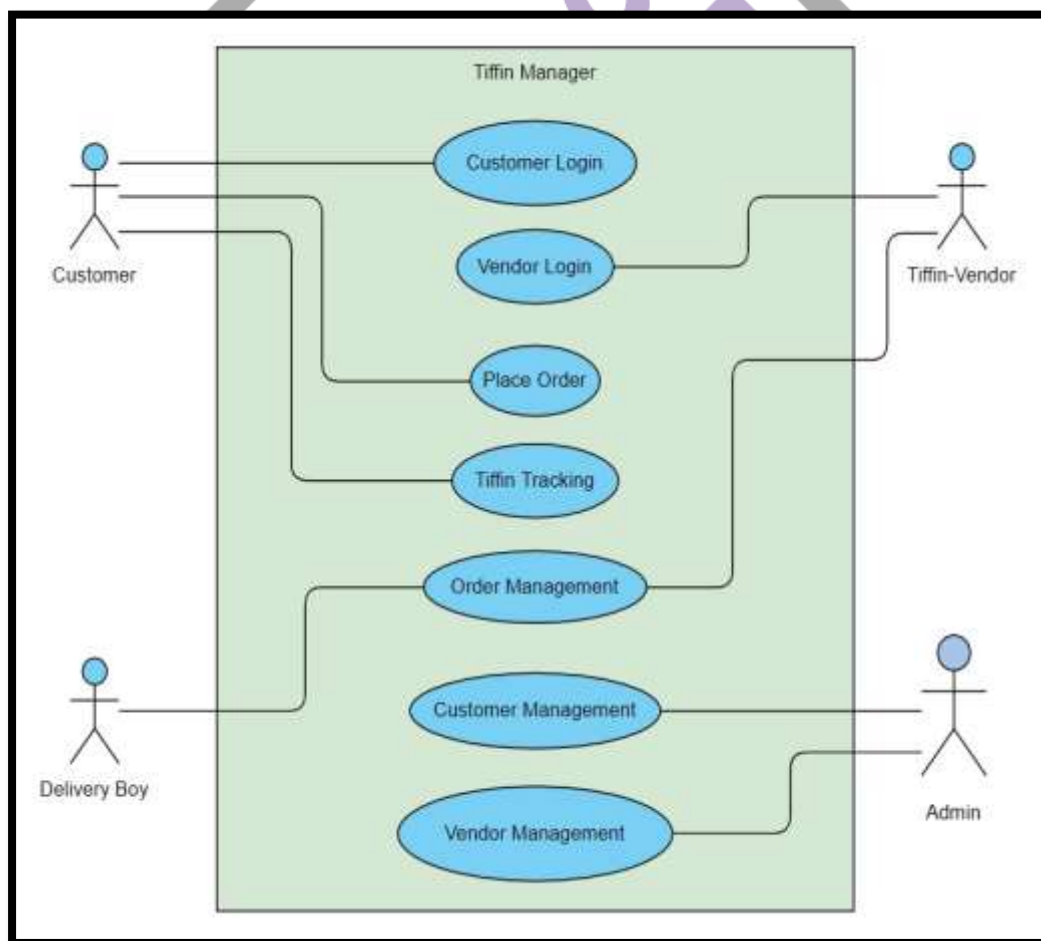
Delivery-boy module

After food is prepared the remaining work left is delivering the food. The delivery boy may be the tiffin-vendor himself or some other person that is responsible for delivering the food to the customer. Hence if a separate delivery-boy is present for a tiffin-vendor then it is important that the same module of order lists along with the addresses to where it is to be delivered is to be shared with the delivery-boy. The delivery boy's location is helpful in tracking the tiffin.

Admin module

A centralized management of the whole system is achieved by the admin module. It has a store of customer profiles, tiffin-vendor profiles and delivery-boy profiles. Various analytics can thus be performed considering the data in store. The tiffin-vendor that wants to enroll for the system simply registers himself with the admin whereby the admin charges him/her the fee for broadcasting his/her tiffin service. Then using the unique credentials allotted to him/her the tiffin/vendor logs in into the tiffin-vendor module on his phone. The tiffin details and all menu details of a tiffin-service must be given to the admin so that he can then update the vendor's page appropriately.

VI. USE CASE DIAGRAM OF THE SYSTEM

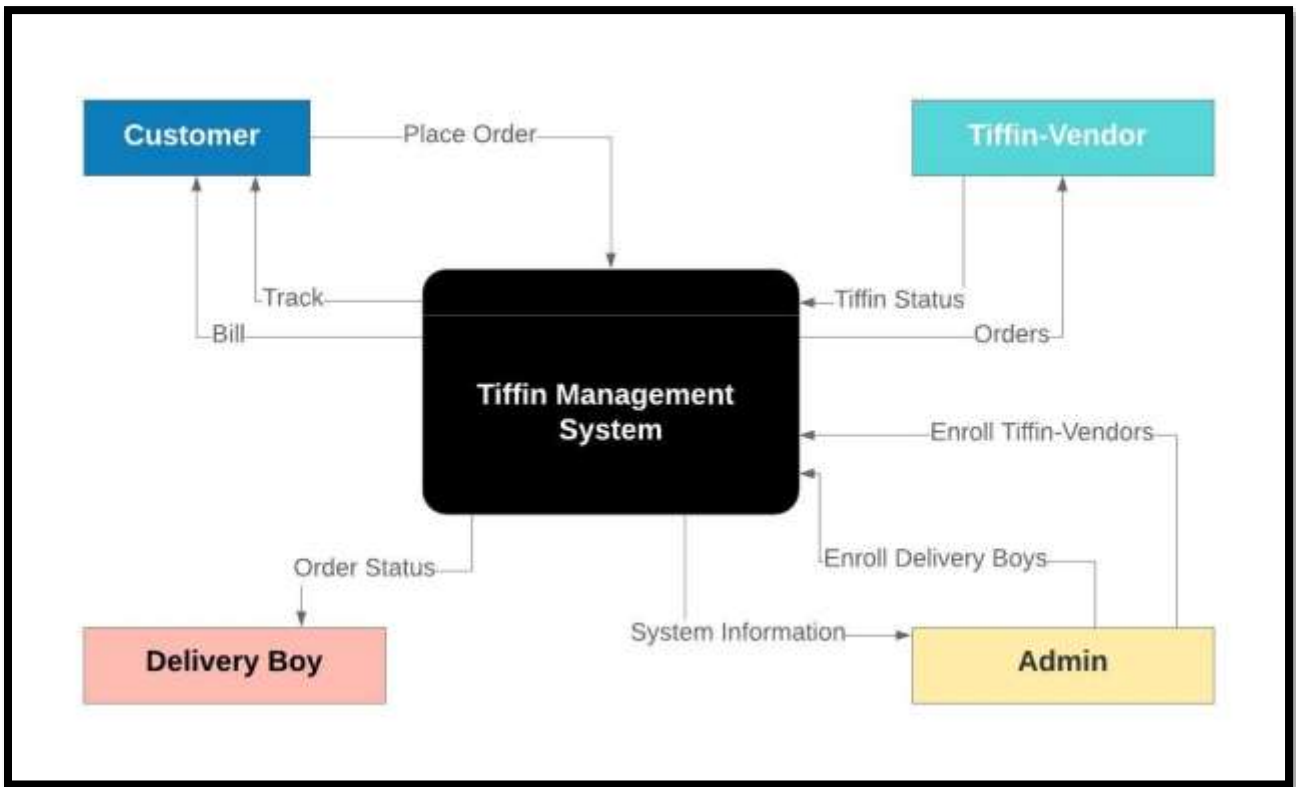**VII. DATA FLOW DIAGRAMS OF THE SYSTEM**

Level-0 Data flow diagram

Fig. 1
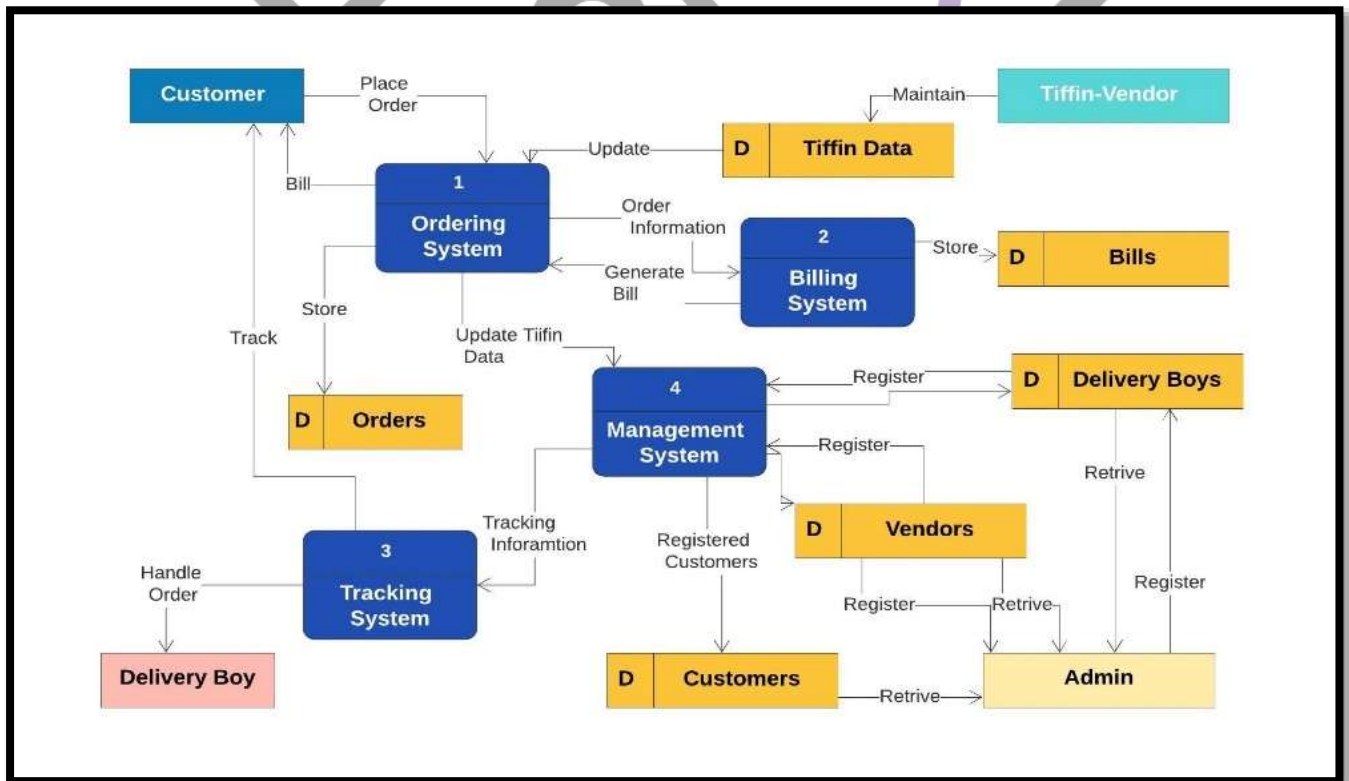
Level-1 Data flow diagram

Fig. 2

VIII. CONCLUSION

The proposed tiffin management system provides a secure and user-friendly interface for handling the tiffin order. The system can be easily adopted by tiffin-vendors and used by the customers. The hassle of managing the orders, bills, delivery patterns is thus eradicated. It leverages the performance of normal tiffin delivery system to another level.

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