T-Moms for Restaurants

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The aim of this study was to identify the drawbacks of a restaurant order management system and suggest a solution. Several such systems were studied and it was identified that customers waiting time to receive an order is considerably high. This is because during peak hours the waiter staff is not sufficient and the service offered is not to the required standard. In addition, the paper menus can be flimsy, hard to navigate, and outdated. To reduce customer's wait times, management must ensure sufficient staff to present during peak hours and that they are properly trained to provide excellent customer service. These staffing issues can lead to substantial costs for the business. As a result, the Tablet based Menu and Order Management System (T-MOMS) was implemented to resolve these problems using mobile devices. The T-MOMS contains four systems, a mobile application for customers and three web based systems for the admin panel, kitchen and cashier. The order is taken by a mobile device namely, a tablet placed on the restaurant table which acts as a waiter. The mobile application is started by a waiter by logging into the system and assigning the table number and a waiter identification. The waiter identification and table number are saved in the application until that particular waiter logs out. The mobile application has four subsystems namely, display subsystem, assistance subsystem, commenting subsystem and ordering subsystem. The display subsystem displays the complete restaurant menu by categories, special offers' information and allows the customer to browse all the currently available menu items by category. The assistance subsystem allows the customer to call a waiter for any assistance needed. The commenting subsystem allows customers to create user accounts for adding comments and share experience on Facebook/Twitter. The ordering subsystem allows to select the desired items and make the order. Once the customer makes the order, first he will be able to view the order information that he has ordered including the payment with/without tax and service charge. After the customer confirms the order, the order is transmitted to the kitchen department via Internet for meal preparation. The kitchen web system displays all order information that are received from the tablets. This include the customer details, table number, the waiter identification and the details of the order. After the order is prepared, the waiter will deliver the order to the customer. At the same time, the cashier web system receives the details of the delivered order and the bill is prepared. The web based admin panel system allows the restaurant's management to add/view/remove/ update menu items and waiters, view reservation information and their cooking status/payment status, update service charge/tax, viewing revenue information over a time period. The T-MOMS system consists of a central server and a database. All ordering and expenditure information is stored in a central database. Eclipse and PHPStorm used as the IDEs. Mainly used languages are HTML, JavaScript, PHP, JAVA, XML. The menu application is designed to be used on 7" tablets as well as it will be supported on smaller screen sizes. As future development, features such as restaurant statistics should be implemented, paying the bill directly through the menu application should be created.

Keywords: Android application; Android digital Menu; Android food ordering system; Android Mobile Application; Restaurant Mobile Application

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