

M commerce in Android Application

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Abstract: M-commerce (stands for mobile commerce) is the transaction of goods and services through wireless handheld devices. It's a complete online shopping experience, but with all the convenience of being on a cell phone or tablet. M commerce enables users to access the Internet in a wireless environment. This paper provides a way to ease the shopping experience with the help of m-commerce.

I. Introduction

Global e-commerce industry is growing leaps and bounds by the help of mobile e-commerce technology. Online retailers are receiving more orders through mobile, thus pushing demand of mobile app development. The new technological advances allow countries to "leapfrog" years of wired technology and infrastructure development.

A. Traditional Shopping

There are still people who **need to touch and feel the product before buying it**. The online businesses have set the wheels in motion in this regard and offer the possibility of a completely free return if the product does not satisfy.

In traditional shopping customers have to wait in long queues to bill their products as well as they have to carry the goods which they purchased by themselves as physical stores usually don't offer the home delivery services.

B. Android

Android is a mobile OS developed by Google.

The Android OS is based on the Linux kernel. Android is open source which means developers can customize the OS.

Features of Android:

1. Multiple language support

Language is very important in the overall interface of the app. Appending more languages supports the wider audience. This makes the Android application more usable and it reaches a wide number of audiences who can comfortably use it.

2. Multi touch

Multi touch enables the creation of reasonable collaborative touch systems, in which several users can interact with the screen. Multi touch feature makes touch screens very flexible user interface system and enables extremely intuitive applications.

3. Multitasking

Background multitasking of the apps enables the users to resume the app whenever necessary.

4. Streaming media support

Streaming Media is the media content such as news, films, music sent in compressed form over the Internet and played immediately without being saved to the hard drive. Since the Media is sent in a continuous stream of data it can play in the user's mobile as it arrives through the internet and the user need not wait to download the file to play. The promotional videos of the product can be directly played in the app without being redirected.

5. External storage

External storage device can be removable or accessible over a wired or wireless network. External storage increases the storage capacity and enables the users to store data separately from the device's main storage.

II. Literature Survey

Due to rapid growth of technology, business organizations have switched to electronic method of selling goods. Business organizations use internet as a main source to conduct transactions.

Online stores can display wide range of products as they don't have space constraint. It helps the customers to purchase a product after a good search.

Advantages of e shopping

- *Saves time and efforts.*

Customers can purchase items from the comfort of their homes saving the travelling time.

- *Wide range of products.*

Users can select the desired product from the wide range of products and categories available online.

- *Get detailed information of the product.*

The detailed genuine information of the product is provided to the customer.

- *Comparison.*

The user can compare the price and the features of the product from different applications.

- *24*7 availability*

Users can shop anywhere anytime since the application does not have opening and closing time.

- *Online tracking*

Once the order has been placed the user is given the tracking id which he/she can use to track the product.

Issues faced in traditional shopping

Customers have to travel a certain distance for the product with no guarantee of the availability of the product. It costs money to build the shop. Not all the stores offer the exact item for the customers. Users don't have an option of comparison of the prices from different stores. It's very less convenient because the customers have to stand in long queues to make the payment and have to carry the items home by self. It's a time consuming job.

III. Proposed Work

In this proposed work the user will have the convenience of shopping from the comfort of home securely. User will be offered wide range of products with price comparisons.

A. Application features

The m commerce app will have the following features:

Maintains order history

Once the order has been placed the history of the orders is maintained in the user's account which the user can use to reorder the items.

Online tracking of items

Online tracking process gives the information to the users about the status of the orders. Users will be aware of where their parcel is, whether the order is in the filling, shipping or delivery process. An order tracking process lets you know if the order is still waiting to be shipped, if it is still in a warehouse or if it is en route to the delivery address.

Hassle free returns

The m commerce gives the return features to the customers who are not satisfied with the product. Door step pickup is arranged. The money is refunded to the customer's account as soon as the returned product is received by the seller.

Easy payment methods

M commerce offers various payment methods such as net banking, credit and debit cards. For those customers who don't have a bank account Pay on delivery feature is available for them to carry out the transactions.

Secure transactions

Passwords and the ids of the user travels in an encrypted format so that it cannot be intercepted by the intruders, apart from this, the app itself has fraud and risk detection system.

Privacy of user profiles

The user profiles with their passwords and saved bank ids are kept in a very secure database which cannot be accessed by any third parties.

A. Technologies Used

Android SDK

Android SDK is the software development kit used to develop applications for Android platform. The Android SDK includes the **required libraries** to develop the application, **debugger** which shows the point to point errors and an **emulator** which reduces the overhead of connecting a physical device.

Android Studio

Android Studio 3.0 is the official Integrated Development Environment (IDE) for Android app development. Android Studio offers more features that enhance the productivity when building Android apps, such as:

A rich layout editor:

It allows the users to drag-and-drop UI components, preview layouts on multiple screen configurations. Preview appears instantly as the user changes in the layout editor. User can choose a language, and can see the preview of layout with that locale.

Deep Code Analysis:

Pointing to a line gives detailed explanation about an exception based on the annotation added. It also has the powerful code completion. User can also inspect code in whole project, IntelliJ lists all Lint errors during code inspection.

Instant run:

Android Studio's Instant Run feature pushes code and resource changes to the running app. It intelligently understands the changes and often delivers them without restarting the app or rebuilding the APK, so that user can see the effects immediately.

Fast and feature-rich emulator

The Android Emulator installs and starts the apps faster than a real device and allows to prototype and test the app on various Android device configurations.

A flexible Gradle-based build system

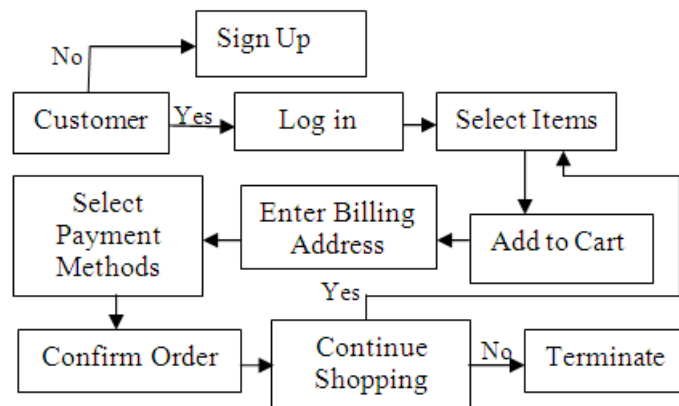
The open source Gradle build system allows the user to tailor the build to your environment and run on a continuous integration server such as Jenkins.

C. Database

Firestore Database

The Firestore Database is a real time cloud-hosted secure database. When cross-platform apps are built with Android, and JavaScript SDK's, all the clients share one Real time Database instance and automatically receive updates with the newest data.

D. Block Diagram



IV. Conclusion

With mobile phones setting the trend today, e-commerce is of utmost importance to the users who want the convenience just a click away. Secure and easy transactions are of utmost need. The orders made by the customers will be recorded, the user's information will be securely maintained in the database, and the customers are no longer required to wait in the queue to bill their products. The customers will be notified when the stocks are back.

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