BAHRIA UNIVERSITY (KARACHI CAMPUS)
Computer Programming (CSC - 113)
Assignment 04 Fall 2022

Class: BSE 1B   **[CLO-4]**   Shift: Morning
Course Instructor: MUHAMMAD FAISAL   Submission: 26 Dec 2022

RESEARCH REPORT ASSIGNMENT

Topic: App Store.

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Abstract:

As mobile devices have overtaken fixed Internet access, mobile applications and distribution platforms have gained in importance. App stores enable users to search for, purchase and install mobile applications and then give feedback in the form of reviews and ratings. A review might contain information about the user's experience with the app and opinion of it, feature requests and bug reports. Hence, reviews are valuable not only to users who would like to find out what others think about an app, but also to developers and software companies interested in customer feedback. The rapid increase in the number of applications and total app store revenue has accelerated app store data mining and opinion aggregation studies. In addition to studies examining online product reviews, there are now some academic studies focused on mobile app stores and user reviews.

Introduction:

The App Store is an app marketplace developed and maintained by Apple Inc., for mobile apps on its iOS and iPad OS operating systems. The store allows users to browse and download approved apps developed within Apple's iOS SDK. Apps can be downloaded on the iPhone, iPod Touch, or iPad, and some can be transferred to the Apple Watch smartwatch or 4th-generation or newer Apple TVs as extensions of iPhone apps.

The App Store was opened on July 10, 2008, with an initial 500 applications available. The number of apps peaked at around 2.2 million in 2017, but declined slightly over the next few years as Apple began a process to remove old or 32-bit apps. As of 2021, the store features more than 1.8 million apps.

App Store is of many types Depending on operating system.

- Apple App Store (For IOS Operating System).
- Google Play Store (For Android Operating System).
- Microsoft App Store (For Windows Operating System).

1. Apple App Store:

The Apple App Store is an app store platform, developed and maintained by Apple Inc., for mobile apps on its iOS and iPad OS operating systems. The store allows users to browse and download approved apps developed within Apple's iOS Software Development Kit. Apps can be downloaded on the iPhone, iPod Touch, or iPad, and some can be transferred to the Apple Watch smartwatch or 4th-generation or newer Apple TVs as extensions of iPhone apps. The App Store was opened on July 10, 2008, with an initial 500 applications available. As of 2021, the store features more than 1.8 million apps. App publishers must submit their app to a testing process, adhere to Apple's rules and guidelines, and meet several prerequisites.

2. Google Play Store:

Google Play Store is a digital distribution service operated and developed by Google. It serves as the official app store for certified devices running on the Android operating system and its derivatives, as well as Chrome OS, allowing users to browse and download applications developed with the Android software development kit (SDK) and published through Google. One can install apps, games, and digital content on one's device from the Google Play Store. Some content is available at no charge, and some you need to buy. Google Play is an online store where people go to find their favorite apps, games, movies, TV shows, books, and more. It provides 2 million apps & games to billions of people around the world. Google Play Store is more developer friendly, leading to a substantially larger number of both developers and apps. There is less risk in choosing to submit an app to Google Play because the approval rate is much higher than on the App Store.

3. Microsoft App Store:

The Microsoft Store, formerly called the Windows Store, is an online marketplace for consumers to buy and download a variety of items. The store enables users to purchase hardware such as PCs, Surface products and Xbox consoles, or download software and digital content, including apps, games, movies, or TV shows. 3 Microsoft announced the Windows Store in September 2011 and opened the marketplace in February 2012. The store offered listings for certified Windows applications and was hosted on Windows 8 and as a web-based storefront. The marketplace could also track product keys and licenses. In the second quarter of 2022, the Microsoft Store (previously known as the Windows Store) hosted and distributed 44,275 gaming apps, making it the largest category of mobile apps on the platform. Utilities and tool apps ranked second, with approximately 10,000 apps hosted and distributed in the Microsoft Store.

Benefit of App Store:

➤ The software available on an app store is officially approved by the store operator. For instance, Apple inspects all software on the macOS and iOS App Stores, and Google inspects all software on the Play Store. The code of each app is reviewed to make sure it doesn't contain malware or viruses, and

conforms to other guidelines for the user's device. The software is then digitally signed by the store operator to prevent it from being altered without the operator's knowledge and approval.

Other benefits of app stores are as follow:

- Convenience - Users can search for new software in one familiar place on their device.

- Trust - Instead of needing to trust a wide array of software vendors, trust can be placed in a single entity (the store operator).

- Consistent experience - Because software must conform to device guidelines, separate apps have a greater consistency of interface and user experience. The user is already familiar with the general way the software looks, feels, and operates.

- Easier updates - When an update is available for software installed from the app store, the store can notify the user. The user does not need to manually check for new updates. If multiple updates are available, they can be installed by the app store all at once.

Literature Review:

All major mobile operating system vendors, including Apple, Google, BlackBerry, and Microsoft, run their own app stores, which gives them control over the software available on their respective platforms. There are also several third-party app stores in operation; examples include the Amazon Appstore for Android and Cydia for jailbroken iOS Apple devices. Previously, Android users had to get apps, games, movies and TV shows from the Android Market, music from Google Music and electronic books from the Google eBook store. Google's decision to merge all these stores into one portal made the lives of all Android device owners much easier, and it likely helped to expand the reach of the OS in general.

The Google Play Store for Android and the Apple App Store for iOS are the two largest distribution channels for mobile apps, offering almost global coverage to a huge potential audience. However, as competition in the two major stores has grown, developers have found it increasingly difficult to achieve visibility for their apps on these stores. Google Play is an online store where people go to find their favorite

apps, games, movies, TV shows, books, and more. It provides 2 million apps & games to billions of people around the world.

Along with internet and world wide web, mobile devices have gained popularity because of their portability, accessibility, and location awareness. Concurrently, the ever-increasing demand for various kinds of mobile apps running on different devices has led to a corresponding increase in mobile developers and competitive mobile app markets. App ecosystem opinion mining studies did not start until the early 2010s, soon after the launch of the Apple app store, the first application distribution platform, in July 2008. The success of the Apple app store has led to the launch of other similar stores and services, with an exponential growth both in number of applications and revenue. The Apple app store generated over 10 billion dollars in revenue for developers in 2014 and currently offers about three million apps (Statista, 2014).

User ratings and reviews are user-driven feedback that may help improve software quality and address missing application features. However, it is difficult for an individual to read all the reviews and reach an informed decision due to the ever-growing amount of textual review data. Hence, over the last several years, various techniques and automated systems have been proposed to mine, analyze and extract user opinion and sentiment from app store review text. App Store Analysis literature encompasses studies that perform analysis on a collection of apps mined from an App Store. We are particularly interested in studies that combine technical with non-technical attributes, as these studies pioneer the new research opportunities presented by app stores. However, we also include studies that use app stores as software repositories, to validate their tools on a set of real-world apps, or by using specific properties such as the malware verification process apps go through before being published in the major app stores.

Conclusion:

In general, an app store is an app that helps a user find software and install it on their computer or mobile device. It's a collection of free or commercial software and games approved for use on your device. You can browse, purchase, download, install, and update software through your device's app store. It is an online portal through which software programs are made available for users and through this

online portal user can download and install application. An app store is an application that helps a user find software and install it on their computer or mobile device. It's a collection of free or commercial software and games approved for use on your device. You can browse, purchase, download, install, and update software through your device's app store.

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