Two months Internship Report

on

Android App Development

Submitted by

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(B.E Final Year)

SBID: **SB20220228465**

Under the guidance of
Sandeep Doodigani Sir

In collaboration with

(Aug-Sept , 2022)

DECLARATION

I hereby declare that I have completed my two months Google supported virtual internship program in collaboration with AICTE from 01 Aug 2022 to 30 Sept. 2022 under the guidance of Sandeep Doodigani Sir(Smart Internz). I declare that I have worked with full dedication during these eight weeks(Two months) of internship program and my learning outcomes fulfill the requirements of internship for Internship certificates.

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Acknowledgement

I wish to express my gratitude to , Google supported internship program in collaboration with AICTE for providing me an opportunity to do my internship and project work in "Android App Development" using Kotlin. Under guidance I have completed my project and tried my best to implement what I had learnt till now.

I sincerely thanks to Sandeep Doodigani sir, our mentor for his guidance and encouragement to do my internship. He also help me by updating us about the information of what to do and not to do during our internship and help us with all. I also thanks my friends for helping me with my problem that I face in my project.

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Introduction

What is an app?

App is an abbreviated form of the word "application". An application is the software program that is designed to a specific function directly for the user which can be accessed easily.

What is an Android?

Android is an open source operating system for mobile devices such as smart-phones , tablet smart-watches and computers. Android offers a unified approach to application development formobile devices which means developers need to develop only forandroid , and their applications should be able to run on differentdevices powerd by android.

Android are developed by the Open Handset Alliance(OHA) , led by google , and other companies.Android is mainly based on direct manipulation using touch gestures that looses correspond to real world actions. It provide us with the manipulate on-screen object, along with a virtual keyboard for text input.

History of Android?

Android was initially developed by the American Technology Company Android Inc.

Android began in 2003 as a project of the this company to develop an operating system for digital cameras. The code names of android ranges from A to N.

In 2004 the project changed to become an operating system for smartphones. Android Inc. , was bought by the American search engine company Google Inc. in 2005.

The first public Android Beta Version 1.0 was finally published on
5th November 2007.

Android version names or based on sweets.

Latest version of Android OS now a days is android 12, released in October 2021.

Knowing Android

Android App Development

Android software development is the process by which applications are created for devices running the Android operating system. Google states that "Android apps can be written using **Kotlin, Java, and C++** languages" using the Android software development kit (SDK), while using other languages is also possible. All non-Java virtual machine (JVM) languages, such as Go, JavaScript, C, C++ or assembly, need the help of JVM language code, that may be supplied by tools, likely with restricted API support. Some programming languages and tools allow cross-platform app support (i.e. for both Android and iOS§ Third party tools, development environments, and language support have also continued to evolve and expand since the initial SDK was released in 2008. The official Android app distribution mechanism to end users is Google Play, It also allows staged gradual app release, as well as distribution of pre-release app versions to testers.

Kotlin in android development

Support for multiplatform programming is one of Kotlin's key benefits. It reduces time spent writing and maintaining the same code for different platform while retaining the flexibility and benefits of native programming

Android mobile development has been Kotlin-first since Google I/O in 2019. Using Kotlin for Android development, you can benefit from:

Less code combined with greater readability. Spend less time writing your code and working to understand the code of others.

Mature language and environment. Since its creation in 2011, Kotlin has developed continuously, not only as a language but as a whole ecosystem with robust tooling. Now it's seamlessly integrated in Android Studio and is actively used by many companies for developing Android applications.

Kotlin support in Android Jetpack and other libraries. Kotlin language features, such as coroutines, extension functions, lambdas, and named parameters, to existing Android libraries.

Interoperability with Java. You can use Kotlin along with the Java programming language in your applications without needing to migrate all your code to Kotlin.

Support for multiplatform development. You can use Kotlin for developing not only Android but also backend, and web applications. Enjoy the benefits of sharing the common code among the platforms.

Code safety. Less code and better readability lead to fewer errors. The Kotlin compiler detects these remaining errors, making the code safe.

Easy learning. Kotlin is very easy to learn, especially for Java developers.

Big community. Kotlin has great support and many contributions from the community, which is growing all over the world. According to Google, over 60% of the top 1000 apps on the Play Store use Kotlin.

Project

During our internship I have done hands-on-practice on project that is provided by google as for practice.
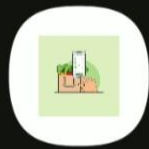
Project github link: https://github.com/smartinternz02/SPSGP-77408-Virtual-Internship---Android-Application-Development-Using-Kotlin
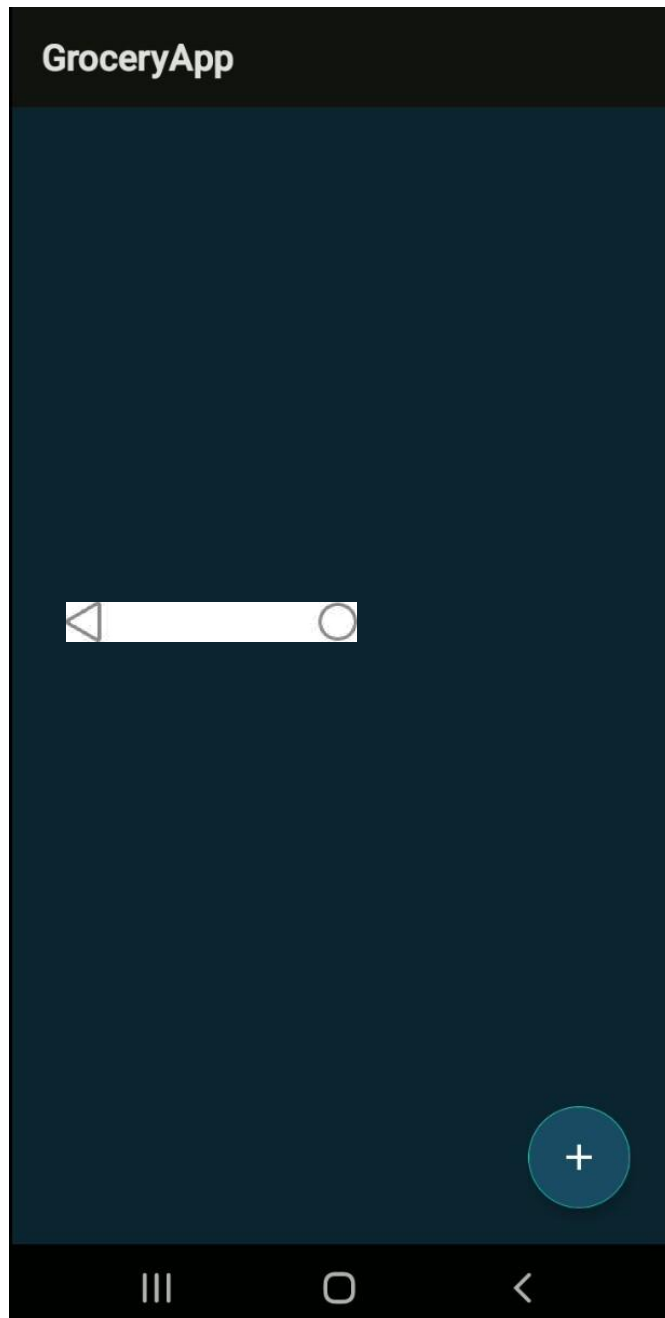
Grocery App

(Project Alloted)

Users frequently forget to buy the things that we want to buy, as we can't remember everything in our daily, busy scheduled life. However, with the assistance of this (Grocery App) app, we can make a list of the groceries that we intend to buy so that we do not forget anything.

App Logo

Initial Empty List

GroceryApp

GroceryApp

Add Item to Cart

Enter Item name

Enter Item Quantity

Enter Item price

Cancel   Add

+

Item Inserted

GroceryApp

Fish	2	Rs. 250	🗑
Total Cost			Rs. 500

Item Inserted..

+

Item Deleted

GroceryApp

Fish	2	Rs. 250	🗑
Total Cost			Rs. 500

Pasta	3	Rs. 25	🗑
Total Cost			Rs. 75

Milk	2	Rs. 60	🗑
Total Cost			Rs. 120

Item Deleted..

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Conclusion

Android is open source and free development plateform based on Linux.

Android operating system is now becoming best among all the other mobile operating system. All Google services can you have with one operating system, namely "Android". By Android versionsits features are increased rapidly.

Android is now stepping up in next level of mobile internet , and is open to all-industry, developers, and users.

I had learnt a lot of android development using kotlin concepts, do hands-on-practice and completed timely the project.

References

google developer : https://developer.android.com/courses/android-basics-kotlin

android wikipedia :https://en.wikipedia.org/wiki/Android_(operating_system)

kotlin wikipedia :https://en.wikipedia.org/wiki/KotIin_(programming_Ianguage)