Project Documentation

App name – Serpent
Category – Educational Application
Based on – Android
Version – 1.0.0
Platform Created – Kodular

Introduction-

The purpose of this project is to develop a mobile application called “Serpent” that offers complete knowledge and end-to-end learning solutions of the Programming Languages.

Preference for Apps -

The younger generation, especially students, prefer learning from easily accessible Apps for the convenience offered. It gives them psychological relief of not having to visit websites and browsing through excessive topics.

Latest Knowledge:

With upgrades on the latest knowledge, modern techniques for education, and a cost-effective means of learning, an educational app comes in as a savior to many!

Effective Time utilization:

These e-learning apps are an excellent way to utilize leisure time. They add value to a daily routine.

Features of Serpent:

1. Excellent Database:

An Educational app must have a solid database of all the content which is required to build the specific application. Relevent information about the particular learning category and all the sections must be regularly updated.

2. Excellent UX/UI:

A Good UX/UI is essential for an educational app. An attractive design, good functionality , and easy navigation are the base for the successful app that can beat the competition too. Ensure that UI is not too overwhelming – unless features are user-friendly , your app doesn't stand a chance with its audience.

3. Interactive Content:

To increase the downloads of your app several times, the content should be enganging . It must grab the eye of the user at a single glance . Here are the vital factors:

- The content should be mobile-Friendly.
- The content should be based on the specific target audience.
- The content must include fun facts and exciting stats to retain the learner's interest.
- Content should be understandable and worth reading as every student is not a quick learner.
- Apps should accomodate feedback for learners.

4.Testing knowledge:

Tests are indispensable to learning ,and educational mobile app must execute the same. Thus, our education app must offer a section where mock tests and quizzes are added based on various topics and subjects. This will help students test their knowledge based on capabilities and know which subject , topic need more focus.

5. Offline Mode:

The availability of a stable Internet connection can be sometimes be a big issue for the applications so by seeing this problem our app must be capable of offering an offline mode, wherein students can download the content.

6. Push Notification:

Push notification is also a considered an essential education app feature and a part of almost every on-demand services app.It connects the app to the user in a non-intrusive way to keep all the user engaged and updated about the latest development in the app. Our app will provide regular push notifications to the users about the content that is being updated or about the latest trends and technologies which helps to make them more productive.

7.One-Step Login

One-step login functionality is a must in an application. One-step login saves time so that student can focus on learning.

8.Audience Segmentation

All this interaction that your students have within your app will result in a lot of data that can be assessed . Make sure to fully utilize this new chance you got: use the data to segment your audience and better understand each segment. This will enable you a more individualized approach to them with upcoming update.

9. In-App Notification:

In-App notification are UI patterns that help you communicate key information with users while users are interacting with application. Our app send In-App notification to all the users about the updated concepts and trends of latest technology.

Minimum System Requirement for installing Mobile Application

The minimum system requirement for a mobile application can vary depending on the specific app and its functionality.However, here are some general guidelines for the minimum system requirements for a mobile application:

Operating System:

This app should specify the minimum supported operating systems, such as Android,iOS (iPhone/iPad), or windows Mobile.

Processor:

The app may have specific requirements for the processor type and speed. For example, it may require a minimum of a dual-core processor or a certain generation of processors.

RAM:

The app might specify the minimum account of RAM(Random Access Memory) required to run smoothly. It could range from 1GB to 4GB or more, depending on the complexity of the app.

Screen Size

Before you can finalize your mobile application's design, you need to figure out how large of an audience you're targeting. Screen size varies between devices, so before creating your app, it's important to understand how many people will be able to access it. For example, Apple devices typically have larger screens than Android devices, meaning your app will need to be slightly different across each platform.

Network Storage

Network coverage has evolved tremendously in recent years, and there's a good chance you have one or more options for reliable coverage in your area. Smartphone users should pay attention to both network types (Wi-Fi, 3G, 4G) and whether their carrier covers their specific region. When considering which cell phone provider to use—assuming you have multiple options available to you—look at what kind of network coverage is available in your area. This includes not only calls and texts, but also Wi-Fi or LTE data connections.

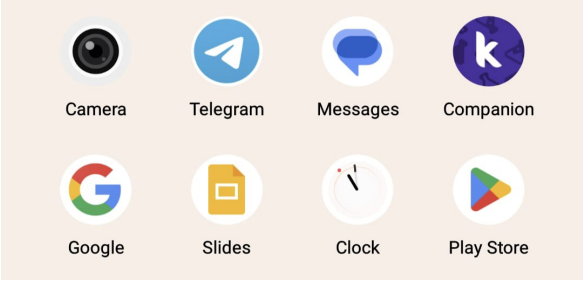
Installation Guide

Step-by-Step Instructions for Installing the Application

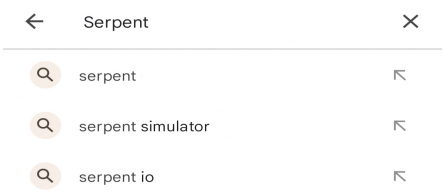
- Open the Google Play Store and tap "Install" on an app that you want to download.
- You can search for the app you want to install by tapping the search bar.
- Alternatively, browse the available apps and categories.

1. **Open the Google Play Store**
   Tap the icon that looks like a multicolored sideaways traingle in your app list. This app is usually called “Play Store”, but may just be called “Google Play” on same Android phones and tablets.

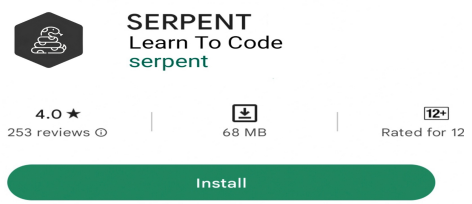
   - If it's your first time opening the Play Store, you'll have to enter your Google account information and payments details. Follow the on-Screen instructions when prompted.



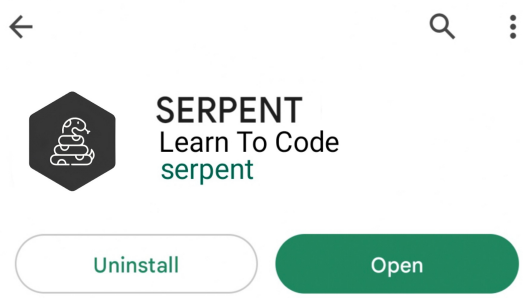
2. **Type an app name or keyword into the search box.** It's at the top of the screen.



3. **Tap Install.** It's a green button just beneath the name of the app.



4. **Tap Open.** When the installation is complete, the 'INSTALL' button will change to an “OPEN” button. Tapping it will launch your new app for the first time.

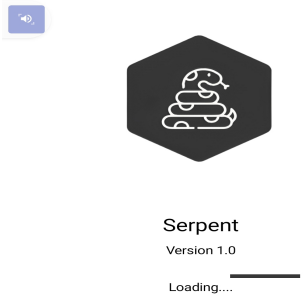


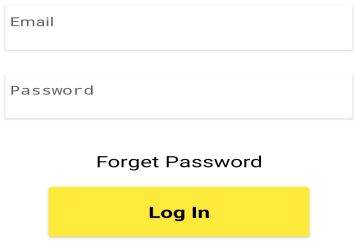
User Flow Diagram

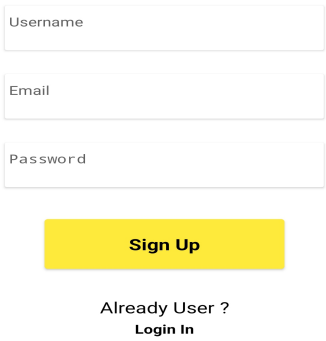
Splash Screen

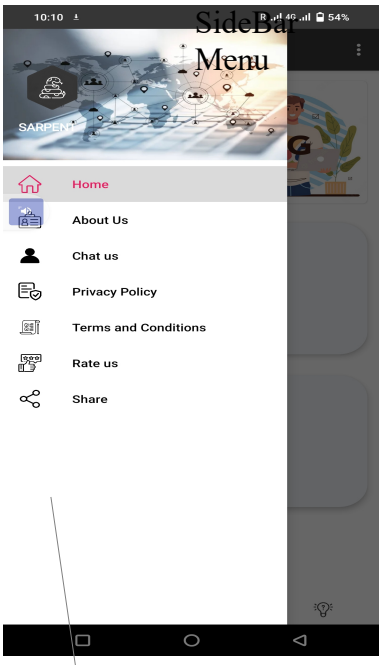
Login Page

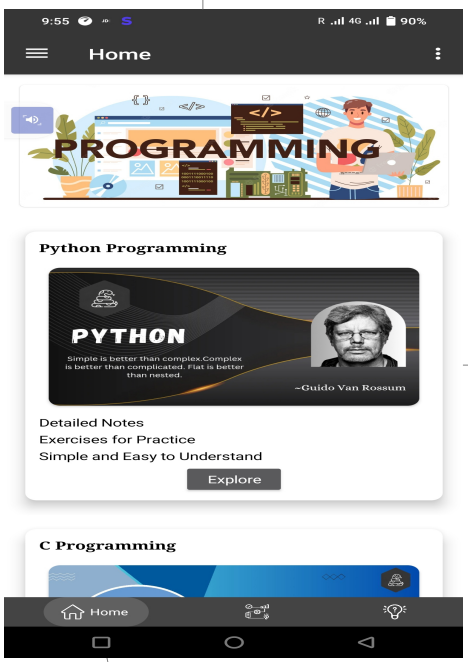
Sign up Page

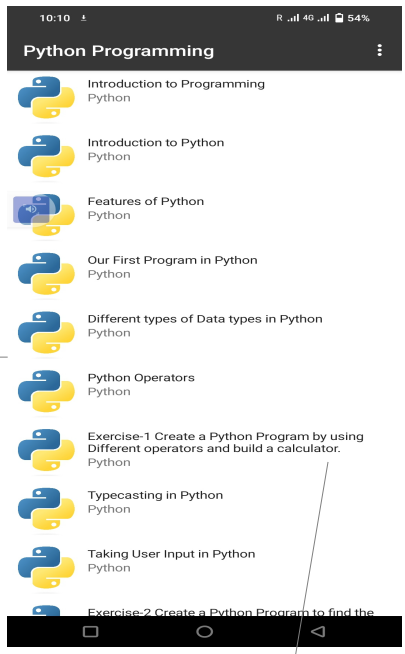












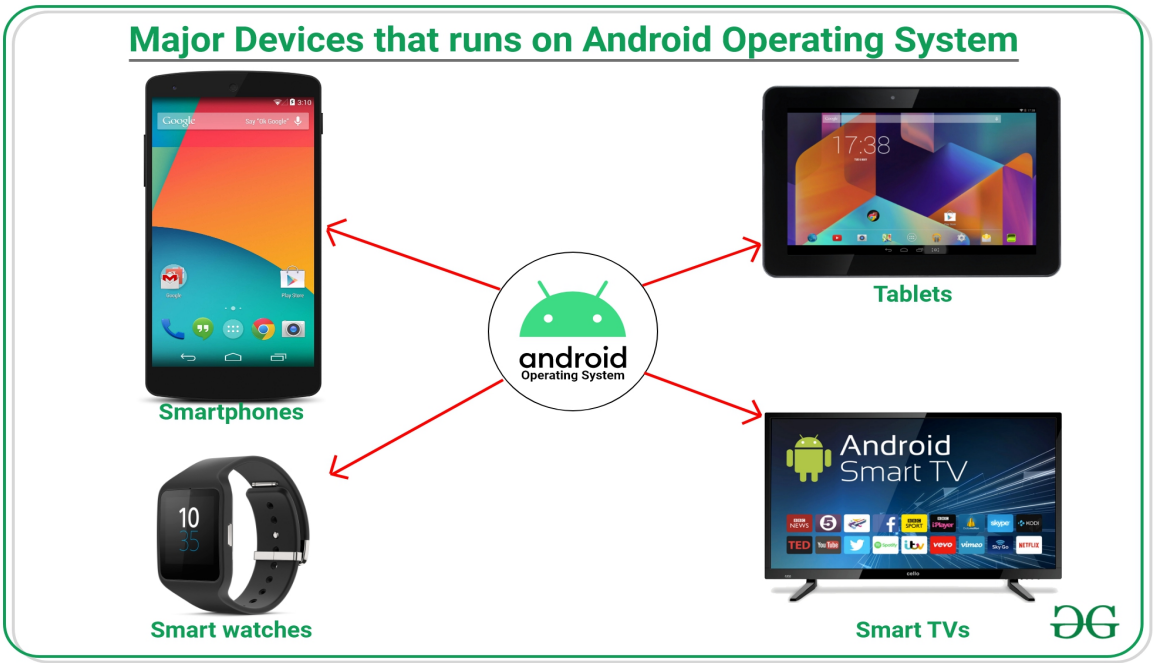
Sidebar

Home Screen

List View

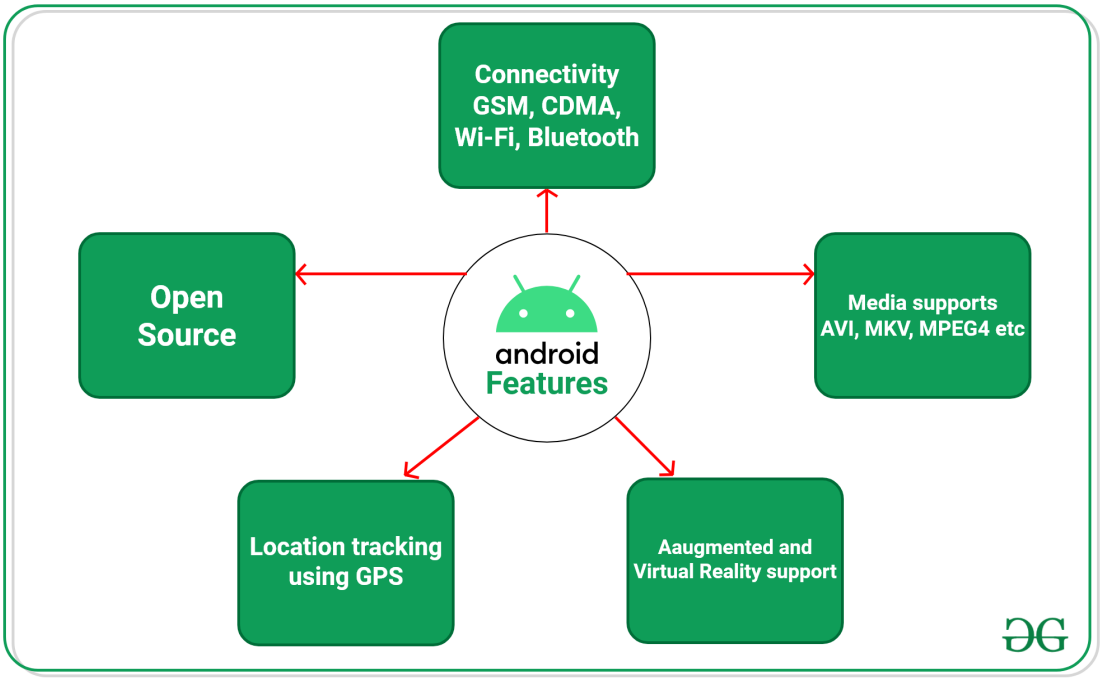
Introduction to Android Development

Android operating system is the largest installed base among various mobile platforms across the globe. Hundreds of millions of mobile devices are powered by **Android** in more than 190 countries of the world. It conquered around **71%** of the global market share by the end of 2021, and this trend is growing bigger every other day. The company named **Open Handset Alliance** developed Android for the first time that is based on the modified version of the Linux kernel and other open-source software. **Google** sponsored the project at initial stages and in the year 2005, it acquired the whole company. In September 2008, the first Android-powered device was launched in the market. Android dominates the mobile OS industry because of the long list of features it provides. It's user-friendly, has huge community support, provides a greater extent of customization, and a large number of companies build Android-compatible smartphones. As a result, the market observes a sharp increase in the demand for developing Android mobile applications, and with that companies need smart developers with the right skill set. At first, the purpose of Android was thought of as a mobile operating system. However, with the advancement of code libraries and its popularity among developers of the divergent domain, Android becomes an absolute set of software for all devices like tablets, wearables, set-top boxes, smart TVs, notebooks, etc.



Features of Android

Android is a powerful open-source operating system that open-source provides immense features and some of these are listed below.



- Android Open Source Project so we can customize the OS based on our requirements.
- Android supports different types of connectivity for GSM, CDMA, Wi-Fi, Bluetooth, etc. for telephonic conversation or data transfer.
- Using wifi technology we can pair with other devices while playing games or using other applications.
- It contains multiple APIs to support location-tracking services such as GPS.
- We can manage all data storage-related activities by using the file manager.
- It contains a wide range of media supports like AVI, MKV, FLV, MPEG4, etc. to play or record a variety of audio/video.
- It also supports different image formats like JPEG, PNG, GIF, BMP, MP3, etc.

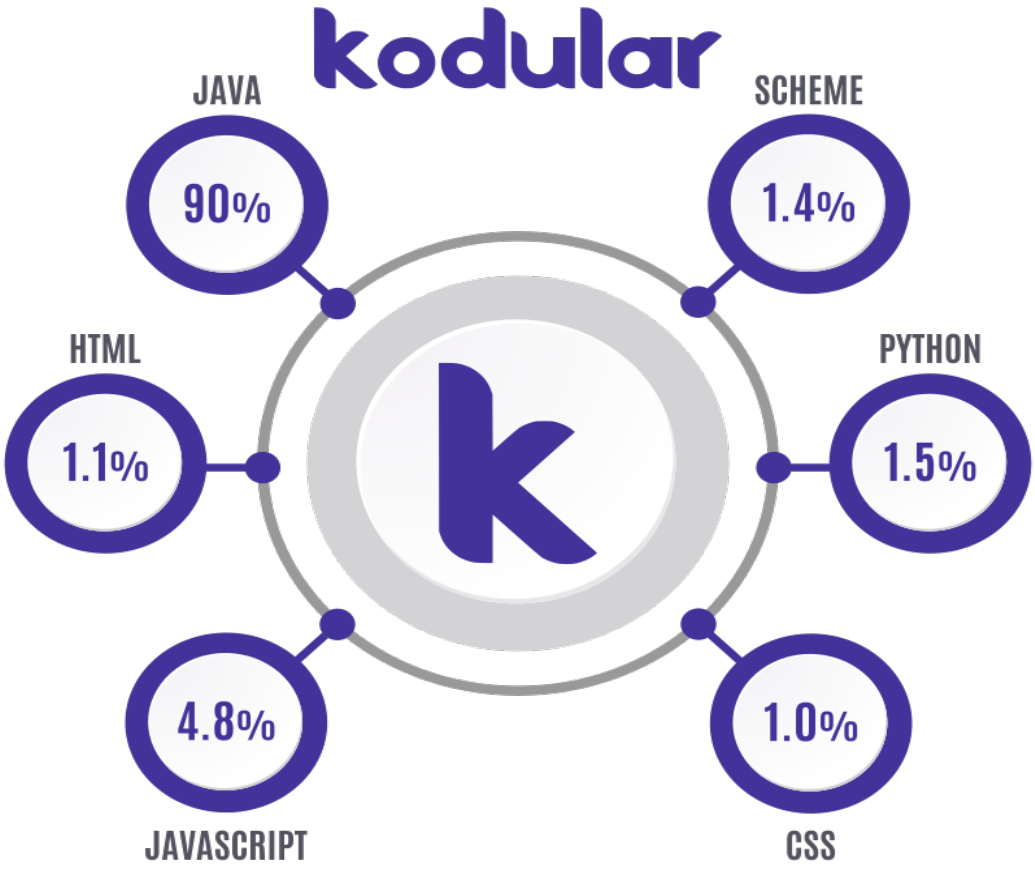
~ Geeks for Geeks

https://www.geeksforgeeks.org/introduction-to-android-development/

At which Platform the Application will be Developed

Kodular:

Kodular, a free platform to let your ideas become Android apps. Simple, beautiful and powerful. Kodular allows you to create Android apps easily with a blocks-type editor. No coding skills required. With the Material Design UI, your apps will stand out.

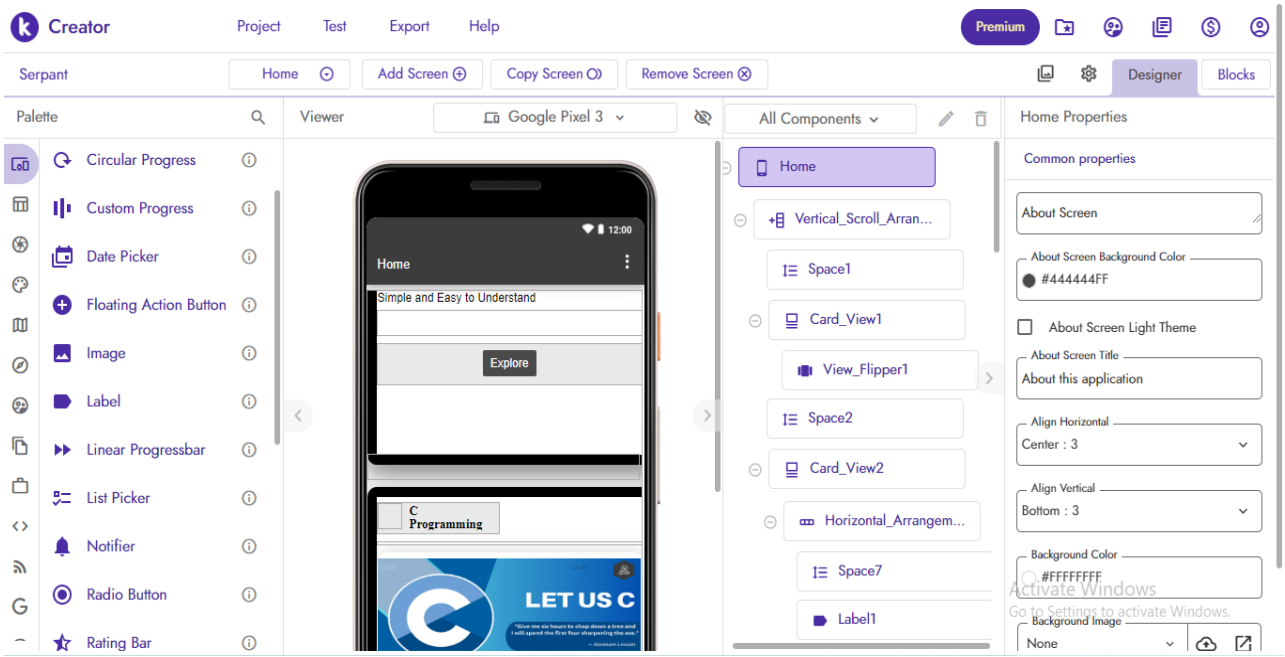


- It is completely free as long as you don't include "ads" in your app.

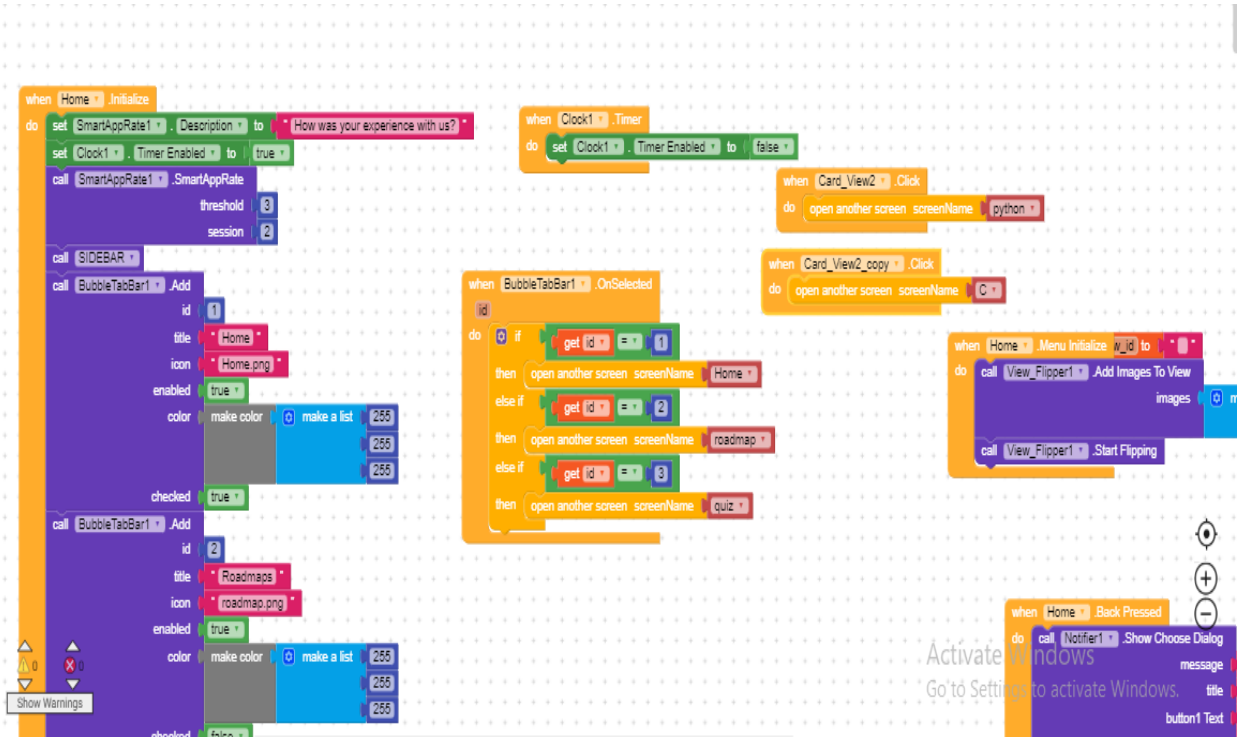
- Kodular Companion allows apps creators using Kodular to live test their apps, without having to export and compile the app!

Overview of the project

Design Section-

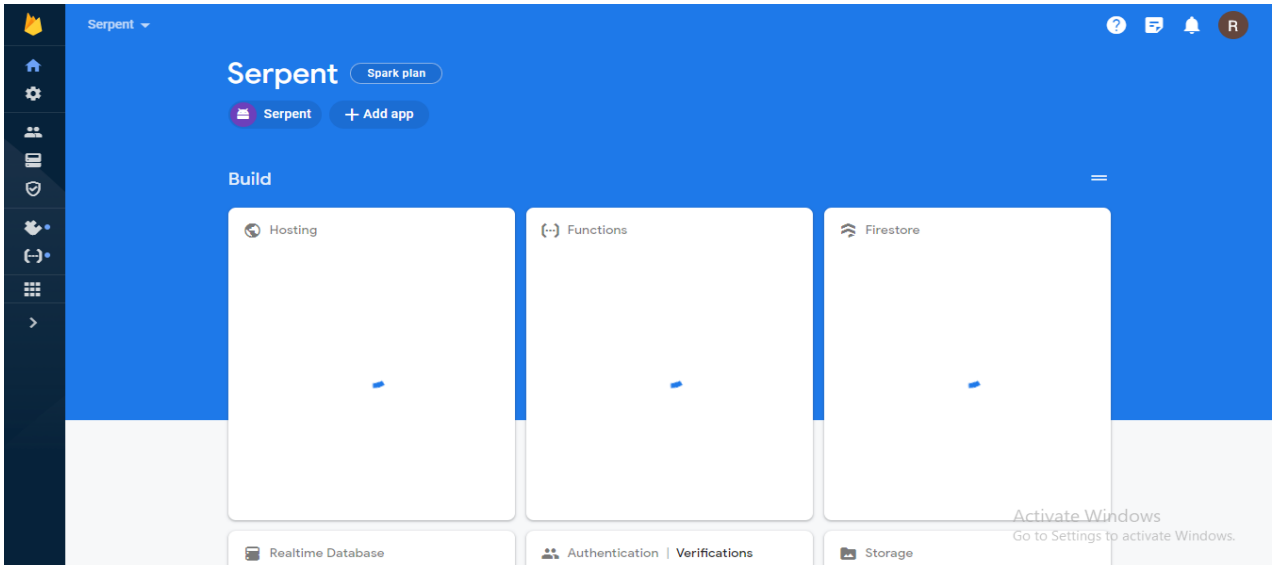


Block Section-



Firebase

Firebase provides tools to grow your app and business, for startups & global enterprises. Get your app up and running quickly & securely with fully managed backend infrastructure. Cross- Platform solutions.Monitor App performance. 15+ Products & Solutions.



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https://firebase.google.com/