**코딩 교구 제작 개인 연구 노트**

빅데이터 4기

이형석

이번 프로젝트를 진행하면서 시도했던 실험들, 겪었던 오류에 대처한 방법들과 참고한 링크들을 기술한다.

* beeware로 .apk 만들기

[파이썬으로 안드로이드 앱 만들기(apk)](https://blog.naver.com/PostView.naver?blogId=goglkms&logNo=222088521207)

* arcade sample

[Sprites That Follow The Player - Python Arcade 2.6.17](https://api.arcade.academy/en/latest/examples/sprite_follow_simple.html#sprite-follow-simple)

* third party package 배포 디버깅

[Tutorial 7 - Get this (third)-party started - BeeWare Tutorial](https://docs.beeware.org/en/latest/tutorial/tutorial-7.html)

* python 내에서 사용할 수 있는 flutter, flet을 활용한 배포 방법

[Flet Tutorial - Build Android APK Release With Cordova](https://www.youtube.com/watch?v=oglPs0lSh1Y&t=145s&ab_channel=SriEdyNurcahyo)

export JAVA\_HOME = /usr/lib/jvm/java-11-openjdk-amd64/

export ANDROID\_SDK\_ROOT = /root/Android/Sdk

export PATH = $PATH:$ANDROID\_SDK\_ROOT/platform-tools/

export PATH = $PATH:$ANDROID\_SDK\_ROOT/cmdline-tools/latest/bin/

export PATH = $PATH:$ANDROID\_SDK\_ROOT/emulator/

export PATH = $PATH:/opt/gradle/gradle-8.4/bin

[[Linux] 우분투 안드로이드 스튜디오 설치 / 다운로드 방법](https://coding-factory.tistory.com/503)

**23.11.06 (일)**

문제

* python의 flet 패키지를 빌드하는 과정에서 버전 문제들이 계속 발생하는 듯하다 .apk는 어찌 나왔는데 apkanalyzer manifest target-sdk 라는 error가 발생한다. 추가적으로 adb devices 인식 개선 및 sdk update하는 방향성이 있어 보인다.
* flutter에 대해 알아보니 쉽게 앱 제작이 가능해 보인다 짧은 기간에 앱 개발을 위해 내일 플러터를 조져보도록 한다.

**Flutter**

[플러터 프로젝트 시작하기 -이론편- [ 플러터 기초 (Flutter Basic) ]](https://www.youtube.com/watch?v=IcRhLBAfb0M&ab_channel=%EC%96%B4%EB%9D%BC%EC%9A%B4%EB%93%9C%ED%97%88%EB%B8%8C%EC%8A%A4%ED%8A%9C%EB%94%94%EC%98%A4-AroundHubStudio)

[MAPLESTORY • FLUTTER GAME FROM SCRATCH](https://www.youtube.com/watch?v=TFrzjwJuDiI&t=196s&ab_channel=MitchKoko)

**App Camera 구현**

[[Flutter] image\_picker로 카메라 및 갤러리에서 이미지 가져오기](https://youngjumoney.tistory.com/12)

**Flutter to .apk**

<https://docs.flutter.dev/deployment/android>

flutter build apk --split-per-abi

**Firebase Flutter 연동**

[Flutter(플러터) 3.0과 Firebase(파이어베이스)](https://www.youtube.com/watch?v=J3OqrOJpPVQ&ab_channel=%EC%BD%94%EB%94%A9%EC%85%B0%ED%94%84)

[[Flutter] FIrebase 세팅하기 (3.0)](https://velog.io/@tygerhwang/Flutter-FIrebase-%EC%84%B8%ED%8C%85%ED%95%98%EA%B8%B0)

**Firebase Cloud Messing (flutter ↔ python)**

[Firebase Cloud Messaging (FCM) integration with Python + Android app with complete source code](https://www.youtube.com/watch?v=VyipWmv61C4&ab_channel=CodingwithTD)

Flutter를 활용한 Mobile Application 구현 과정

1. **Flutter App**: Build your mobile app using Flutter. Flutter allows you to build beautiful, natively compiled applications for mobile from a single codebase.
2. **Firebase**: Use Firebase for user authentication, database, storage, and hosting. Firebase provides a real-time database and backend as a service. The service provides application developers an API that allows application data to be synchronized across clients and stored on Firebase's cloud.
3. **Python Backend**: For any complex processing that can't be handled directly in Flutter or Firebase, you can use a Python backend. This could be a Flask or Django app, for example. This Python app can be hosted on a server and expose APIs that your Flutter app can call.
4. **Communication between Flutter and Python**: You can use HTTP requests to communicate between your Flutter app and your Python backend. The Flutter app makes a request to the Python backend, the backend does some processing and returns a response, and the Flutter app then uses this response.
5. **Firebase Cloud Functions**: To run your Python code, you can use Firebase Cloud Functions. However, as of now, Firebase Cloud Functions support only Node.js and not Python. As a workaround, you can use a service like Google Cloud Functions, which does support Python, and can be easily integrated with Firebase.