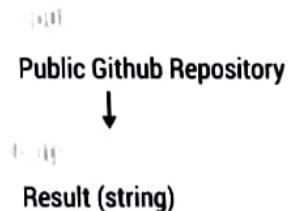# What is SwissKnife ?

- Iterative Flutter app with multiple "weapons" to fight source code anomalies.
- Multifunctionality, with each feature dedicated to solve a perticular anomaly or .
- It can also we viewed as an web app.

# Checker

Based on a research paper there are many factors influencing the nature of the github
commits to a repository such as , time of commit ,size of commit ,file type
changed ,number of lines deleted and added ,etc.
This feature is a very basic version of the prototype asked.

Public Github Repository

↓

Result (string)

# Back End

Python

Python is an open source OOP's programming language which is very convenient for integrating with the front-end. It has a large number of built-in-libraries for various funtions.

Flask

Flask is a web framework, it's a Python module that lets you develop web applications easily

# Technologies Used

SwissKnife is majorly divided into three parts the front end, back end, and Flask API to Integrate them both.

For the basic version of the app, the backend is hosted in a local server and locally accessed by the front end.

# FLUTTER

Flutter is a mobile app development platform created by Google. It allows developers to create web, desktop, and cross-platform apps that run on Android and iOS devices.

Why Flutter?

- Hot reload: Flutter's "hot reload" feature lets you quickly and easily make changes to your app without restarting it.
- Native performance: Flutter apps are compiled to native code, giving you the best possible performance on both iOS and Android.
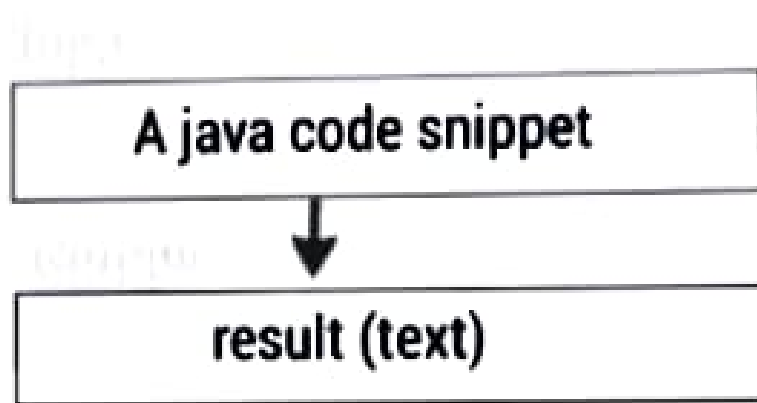
# Java Time complexity calculator

Given a small coce snippet it will calculate the bigO time complexity.

```
A java code snippet
```
↓
```
result (text)
```

# Python Code Maintainability calculator

Code Maintainability is a measure of how complicated the code is :
it has three ranks under which it categorizes a given code file, namely A, B, and C.

Files with MI A are of Very high maintainability
similarly, files with a grade of B have medium maintainability and C are code with poor maintainability. The maintainability of a code file depends on many factors and can be calculated using a formula.

Local Python file        ⟶        Result (character)

## WEAPONS

Weapons are the mini functionalities that can be accessed through the swiss knife app.

Java Time Complexity Calculator

Python Code Maintainability Calculator

# FUTURE SCOPE

The malicious GitHub commit detector
is a very very rudimentary
implementation of a research paper, so
we would like to work on it to build a
more robust model of the same.

We would also like to enhance the
features of code complexity calculation.

# Python Function-call flowchart

Given a Python file path ,this feature of our app will generate a flow chart describing the call made b/w functions.

Python local file

↓

Result (image type (Flowchart))

THANK YOU

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