

**Kiwinest**

**Developer’s guide**

2024.06.04 last updated – Choi Changho(op11091109)

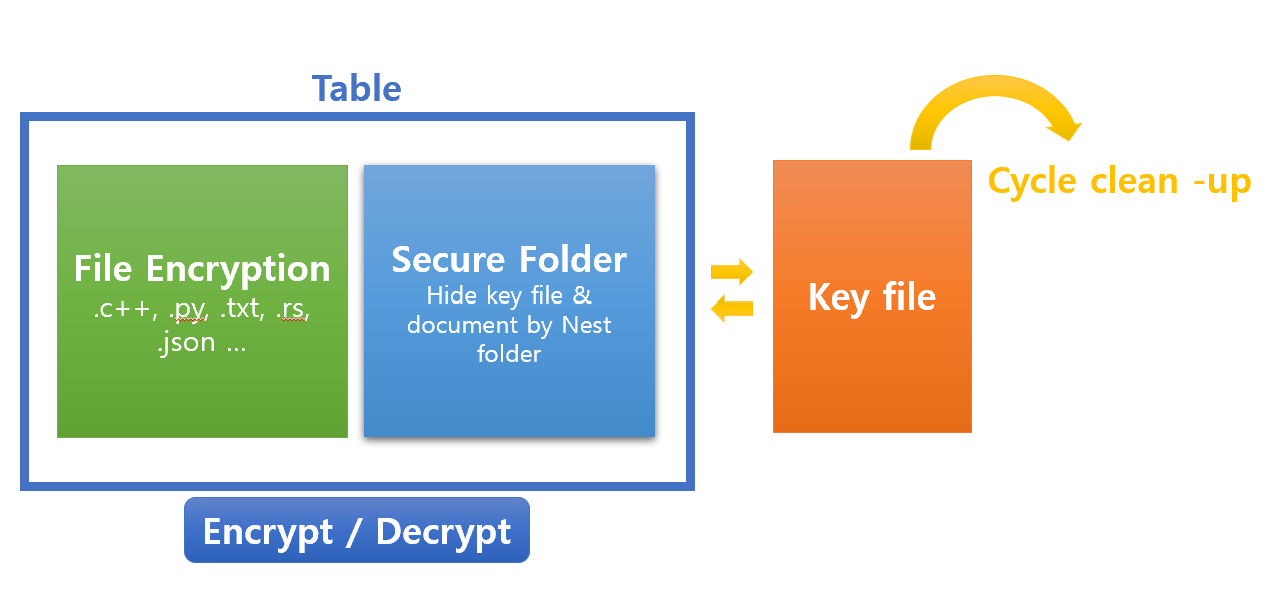


1. **Introduction**

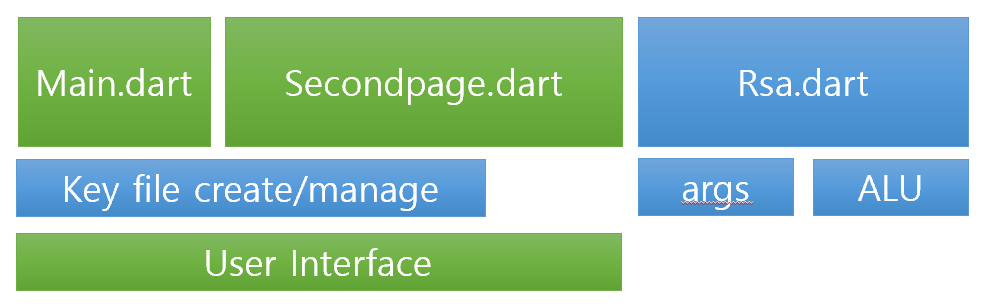
Kiwinest is software that encrypts and stores text files or codes in real time. Real-time encryption means that data is automatically encrypted just before it is stored and decrypted immediately after it is loaded without user intervention. If the correct key file is not used, the data encrypted cannot be read decrypted. Kiwinest is developed through the Flutter framework and can run on Windows, Mac and Linux environments.

■ This is a document for developers who contribute this project.

1. **Project Structure**

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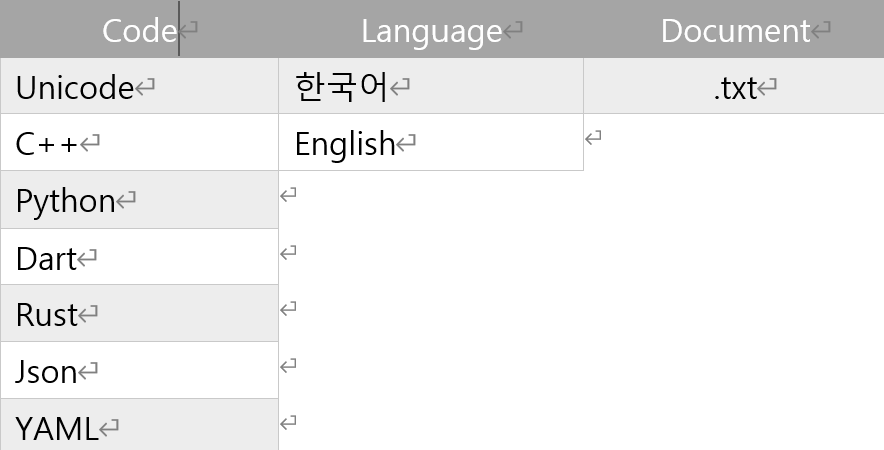
The Abstraction of this project is this. Encryption/decryption is the main function of this project, and both file encryption and security folder functions interact with users through tables. Internally, file encryption/cycle clean-up is operated through key files located in the document/Nest folder.



The abstraction above is the structure of a flutter program created to fit the project structure first described. **Main.dart** provides not only the initialization and build of the overall program, but also the file encryption function and the interaction through the slider. **Secondpage.dart** provides a secure folder function, only Fetch and Eject, but the creation of the Nest folder proceeds during the initialization process when building Main.dart.

**rsa.dart** is a library file that provides RSA operations on the two pages above, and is responsible for key argument generation and operation. Key file generation also takes place during the initialization process at the time of Main.dart build.

1. **Main functions**
   1. **Text / Code Encryption-Decryption**
2. Only the format specified must be encrypted. Only those formats can guarantee 100% integrity when decrypted.
3. Indentation or other symbols may not apply unless they are in the specified format.
4. Generally, 'filename\_encrypted' is generated during encryption, 'filename\_decrypted' is generated during decryption, and 'filename\_encrypted' is deleted, but the code can be modified according to the need for intuition.
   1. **Secure Folder**
5. Because file system control in Mac and Linux environments is not yet fully supported, Nest folders may be visible in certain distributions or versions.
6. In all OSs, Nest creation, Fetch, and Eject all operate mainly on Document files, so there are no special problems.
   1. **Cycle Clean-Up**
7. This feature is activated only when the program is turned on.
8. This is because Flutter does not support background in desktop environments. Therefore, in the current version, the timer runs when Kiwinest is running.
9. **Format**

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\* C file is currently not fully compatible**

1. **Notice & FAQ**

* Flutter doesn't support icon and favicon changes on Linux yet. For Macs, you'll need to make changes to all sizes directly customized. Windows is the only one that still displays all the icons completely.