

# Organization of Kam1n0 Project

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The **Kam1n0** server is managed and built with Apache Maven<sup>1</sup>, which is a software project management and comprehension tool. There are nine Maven modules in **Kam1n0**. Their dependency relations are shown in Figure 1.

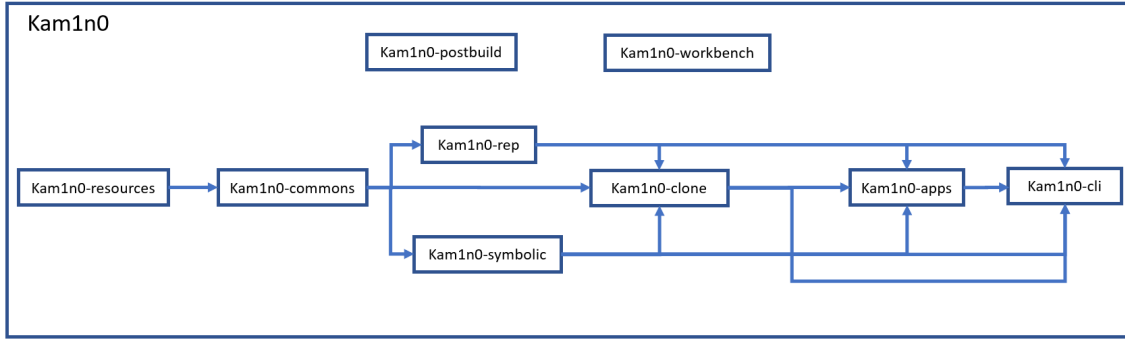


Figure 1: The dependency relations between different modules of **Kam1n0**.

The functions of each module are as follows:

- Kam1n0-resources module stores and loads resources from the file system. The resources include user settings, scripts for disassembly, other dependent modules, and CPU architecture definition-related files.
- Kam1n0-commons module handles storage, computation, and job schedule operations. It directly interacts with Cassandra database, Spark, Quartz Scheduler, and provides Kam1n0 applications with uniform APIs to run their workflows.
- Kam1n0-symbolic module contains functions of symbolic expression for the Sym1n0 application.
- Kam1n0-rep module implements the functions for representation learning including token embeddings, matrix computations, and automatic gradient calculation.
- Kam1n0-clone module implements the indexing, training, and retrieval functions for clone search engines including **Asm-clone** and **Asm2Vec**.
- Kam1n0-apps module contains the definitions of the workflows of applications and the implementation of the front end of Kam1n0. It uses Springboot to handle HTTP requests and Thymeleaf template to render the web page user interface. The workflows, configurations, indexing, training, and analysis procedures of applications are also defined in this module.
- Kam1n0-cli module defines the procedures to be executed when the Kam1n0 engine starts.
- Kam1n0-workbench module is the implementation of a workbench window which allows users to modify Kam1n0 startup options, such as the path of the user workspace, the port to run the web service engine, the java virtual machine settings, etc.

<sup>1</sup><https://maven.apache.org/>

- Kam1n0-postbuild module copies the jar files of Kam1n0-cli and Kam1n0-workbench to a specified location and cleans the intermediate files that are generated for building the whole project.