ABSTRACT

Along with the increasing need of computer programming skills, programming competition become commonly found at regional, national. The competition require an application that can help to create a transparent, fast, and correct competition.

Some applications that already available today has being served the need of the programming competition for the transparent, fast, and correct competition. However problems arise when there is a change in a regulation of pointing system of the competition. Applications that are available today was built into unified system. The judging engine, pointing system, and interfaces have a tight dependency. If there is a change in a component, then there must be a readjustment between the components.

JUNE is a judging engine for programming competition online judge system with web services interface for connecting between judging engine with other components. With the web services interface, “JUNE” expected can reduce the dependency between components in a online judge system so that the judging engine can be implemented for various programming competition models without need to do much readjusting or even rebuilding the whole systems.

To test the application, there is some tests that were used, such as performance test for processing speed of judge engine, correctness test using few models of source code submitted to the engine, and build some client applications to test the flexibility of applications to support various types of programming competition. And the result is JUNE can serve various models of programming competition with 100% correctness and 3.59 source codes per second processing speed.

Keyword: Web Service, Online Judge, Programming Competition.