

## **ABSTRACT**

Batik is a craft from Indonesia that has been recognized by UNESCO as a world cultural heritage. In its development batik has so many features, this is due to the ethnic and cultural diversity in Indonesia. Batik motifs are heavily influenced by the surrounding environment of craftsmen. Biodiversity in Indonesia can be a reference for developing new batik motifs. One of them is by using coral as a batik motif.

With the development of the computing world, many methods have been designed to make batik motif designs. One method that can be used to make batik motif designs with L-Systems. L-Systems is a mathematical theory applied in graphical applications on computers. The main areas for developing the model include fractal generation and realistic plant modeling.

In this research, pavona frondifera type coral motif was made using the L-System method. In making this coral motif, there are several mathematical operations that have a function to form coral images. From the results of testing by conducting a survey, 98% of respondents agreed to the development of coral motifs in the form of coral. From the results of the survey, 63% of respondents said that the pavona frondifera coral motif made was good enough.

**Key Word:** Batik, Pavona Frondifera, L-System, Web Application.