

ABSTRACT

One of Indonesia's greatest and best cultural heritages is batik. Batik has various types of motifs based on the type of manufacture, the area and the carvings. To preserve batik that is by exploring new patterns to be made batik, batik type of coral reefs are still rarely encountered. Therefore, making batik motif marine biota is one way to preserve and preserve the culture of batik by developing a new motif that is the type of coral reefs. Type of coral reefs that will be in focus to become a new batik motif is Acropora Humilis type.

In the present day has been developed batik fractal operation that is made of batik with mathematical calculation and one of method which often used in batik fractal is method of system of Lindenmayer (L-System). L-System is a method of iteration to create virtual plants, for example roots, stems, branches, leaves and flowers. The purpose of this research is to make coral reef motif based on Acropora Humilis coral species with web application. Batik design is made with collections of mathematical operations created with PHP programming language and the design results of coral batik motifs can dijlankan with web browser and output is a PNG image (.png).

In this research has been made design batik motif coral reefs. The value of the angle greatly affect the design and pattern of batik motifs, because the design of this batik in the form of a circle at a point of 360 degrees. This angular value affects the number of coral reef rods that appear on one motive and the direction of stem spreading freely. The maximum length value of coral reefs also affects the complexity of batik design designs of coral reefs.

Keyword: L-System, Batik, Motif, Coral Reef, png, circle.