

CHAPTER 3

RESEARCH METHODOLOGY

The steps in working on this project are:

1. Collect images

Collecting images that have a geometries object in it. This picture will be used as a sample of this research project.

2. Convert color images to monochrome images

Making the image that was a 24 bit (color) image to be a 1 bit image (monochrome). Before becoming a monochrome image, the image is changed to an 8-bit (grayscale) image.

3. Edge detection process

Detects the coordinates of the edge point of the object. These coordinates will be processed to get the length from each side.

4. The geometry recognition process

Get the value of each side by calculating the difference between the coordinates of the end point and the beginning of the detection (top, left, bottom, and right side). After the length of the side is found, the side lengths and coordinates of the edge points that have been found can be reprocessed to identify geometries.

5. Calculating the area

After identifying the type of geometries, the area of each flat building can be calculated.

6. Result

Display the results, output the images that have been converted, then a description of the type of geometries that has been found and its area.