CHAPTER 3
RESEARCH METHODOLOGY

Here are the steps to create animation project with java:

1. **Reading the journals**

Reading journals those can be used as references.

2. **Learning for problems in this program**

The problem of this project is to draw 2D animation, and to make three different directions of movement.

3. **Creating a design**

Designing classes and methods. To create a butterfly animation, we have three classes those are: GerakKupu class, GambarKupu class, and DemoKupu class. In GerakKupu class we create GerakA, GerakB, and GerakC methods.

4. **Creating a program**

- GerakKupu class has a constructor to create the class with four parameters: x, y, picture, and panel. In GerakKupu class there are three methods to set directions of movement those are: GerakA, GerakB, GerakC.

- GambarKupu class has a paintComponent method. The paintComponent method contains components for drawing and creates a new drawKupu method. DrawKupu Method in GambarKupu class contains Graphics2D and GeneralPath to combine image form lines.

- DemoKupu class to test the program.
5. Test this program

The test of this program works or not. If any programs are not working, there is an error message in the terminal.