

## **CHAPTER III**

### **PLANNING**

#### **3.1 Research Methodologies**

This project can be completed with the method waterfall, this method uses a six step are :

##### **1. Analysis**

First, before starting this project, analyze a problem that will occur at the time of the making of the project, as well as find references supporting to help implementation of the project.

##### **2. Study**

Second, after receiving the results of analysis, then give solutions on exiting problems with finding the source of the material support for the solution of exiting problems. These references can be searched through websites, magazines, articels, journals international and books.

##### **3. Design**

Third, the manufacturing process design output can be fulfilled if the results of the analysis and the study already accumulated, make this output design using java gui as required on the application.

##### **4. Implementation**

Fourth, after the design of the design has been completed then start implementing of this project by using java language programming.

##### **5. Testing**

Fifth, the final project outcome has been tested, this step is used to check the system error or can not perform to the maximum.

##### **6. Project Presentation**

Finally, after testing is completed later this project is presented with the presentation of the project has been completed.

### 3.2 Project Management

Implementation schedule of this research described in 6 steps that were completed in 4 months of research. Here are the details of the implementation of that 6 steps:

*Table 3.1 Project Management*

ACTIVITIES	APRIL				MAY				JUNE				JULY			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Analysis	■	■	■													
Study			■	■	■	■	■									
Design					■	■	■									
Implementation								■	■	■	■					
Testing													■	■		
Project Presentation															■	■