

# BAB I

## Introduction

### 1.1 BACKGROUND

Currently, information systems using computer technology act as a tool to facilitate humans in processing data that can accelerate performance in obtaining accurate data and producing more accurate output (information) and can save time, space and costs[1]. Data management will produce valuable information for the benefit of an organization's needs so that data management can be more effective and efficient [2]. PT Jujur Barokah Plastik is a manufacturing company where this company processes plastic waste (raw materials) into plastic bags (finished products) that are ready to be sold to the public. The location of this company is in Pecangaan Kulon, Jepara Regency. Plastic waste or what is called raw materials is obtained from several suppliers, suppliers there are divided into two, namely the Village Waste Bank and individual collectors. The process of making plastic bags themselves from raw materials as above goes through several stages including: collecting similar plastic waste, cleaning waste, crushing it into plastic sand / plastic particles, mixing and heating, the extrusion process, and the printing process then finishing the production results to produce plastic bags with several sizes that are ready to be sold to the public. Currently, products from PT Jujur Barokah Plastik such as: Boyo Plastic, Sangkuriang Plastic, each of these products has its own fans in the market. The distribution range of PT Jujur Barokah Plastik's goods is still within the scope of Central Java and West Java.

The business flow that takes place at PT Jujur Barokah Plastik itself starts from a company manager buying from a supplier to get plastic waste that has been sorted by the supplier, then the plastic waste will enter the raw material warehouse and then be recorded by the raw material warehouse admin. The raw material warehouse admin will prepare the material for the crushing process until the extrusion process and produce sheet materials - sheets that will become plastic bag production materials. While the sheet material will be taken by the warehouse admin as raw material in the plastic bag production process. After production is complete, the warehouse admin will later summarize the report on incoming and outgoing raw materials for production and also record finished goods.

Based on the ongoing business flow at PT Jujur Barokah Plastik, there are several points that are obstacles there, including the data collection of all processes there still uses manual methods or methods, namely using paper and handwriting. This is very worrying because the transaction writing for purchasing goods to suppliers could be lost while in the transaction there is a debt value that must be paid by the company to the supplier. As well as the constraints of production goods stock due to ineffective manual data collection and resulting in a shortage of production materials and a small amount of Reserve inventory so that it can hamper the production process of goods. Data collection of raw materials and also ready-to-production materials is still manual[3]. This is less efficient when the owner or manager asks for the latest stock, they have to look for stock cards for production materials and raw materials (plastic waste). From these obstacles, PT Jujur Barokah Plastik needs a solution with an online and responsive system data collection so that it can be accessed through several platforms such as cellphones, computers.

PT Jujur Barokah also needs to implement the Safety Stock method so as not to run out of inventory or raw materials when consumer demand is high. The system needed by PT Jujur Barokah Plastik is a website system that can be easily developed and easily accessed through multiplatforms. In the development of this system will use the PHP programming language and also manage the MySql database. And the need for the application of the safety stock method so that there is no stock or raw material outage when demand is high. The hope with this research is

to produce a web-based system that can help record keeping in the company to be more effective and efficient.

## **1.2 FORMULATION OF THE PROBLEM**

How to make a waste management information system into a production-ready material by applying the safety stock method to analyze stock requirements so that they are always safe.

## **1.3 SCOPE OF PROBLEM**

In this research, the author limits the problem or scope of the research to the following matters:

- a. Website-based system with several actors: manager, admin gudang mentah, dan admin gudang.
- b. The system will manage data including: plastic waste categories, waste data, product data, and supplier data.
- c. The system will manage information and reports including: transactions for purchasing raw materials (plastic waste), recording the production of waste into production materials, and also recording waste stock and finished product stock.
- d. Implementation of the safety stock method to avoid shortages of raw materials in plastic packaging production.
- e. The system is developed with PHP programming language and manages the MySQL database.

## **1.4 RESEARCH PURPOSES**

The purpose of the research to be conducted is to produce a system that can realize a web-based information system for managing plastic recycling as a raw material for plastic bags, as well as the implementation of safety stock that can help operational managers to analyze the need for raw materials and finished products so that they are always safe and also make it easier for warehouse admins for materials and finished products to update stock in real time.