# CHAPTER I

# INTRODUCTION

## 1.1. Background

An image can keep an information. Sometimes the image needs to be changed into different form of image to get the information beneath the image. Thats why the image processing is needed.

There are various kinds of wood needs. Example, there is one company that wants young woods so they can compress the product price, and the other one wants an old wood so they can create high quality product. Due to various demand of companies, the forest department needs to know about the wood's age. One way to determine the wood's age, by looking at how many the annual rings on the wood.

Therefore, this analysis was made, by taken a annual rings picture using digital camera. Then those pictures will be processed by the computer using image processing. All of the information collected will be processed using grayscale method, edge detection, edge linking, thresholding, and chain code.

## 1.2. Scope

- To detect annual rings on tree trunk.
- To determine, whether the numbers of annual rings from the detection are identical with the actual numbers from visual observation.

### 1.3. Objective

This programs is made in order to make calculation of annual rings on tree trunk easier. The user have to do just input the image of the annual rings on tree trunk then the user can find out how much the annual rings are.