

CHAPTER I

INTRODUCTION

1.1 Background

Internet has been holding the important role of world globalization. The rapid growth of users shows how popular internet has been. On internet, news and information spread quickly through social media, digital sharing site, and e-mail. While this development gives advantages to some people to promote and share about their businesses, lack of privacy and copyright issues often occurs when the information unintentionally or intentionally used wrongly by some people.

There are various techniques that can be used to solve this problem. One of the most popular techniques is steganography. Steganography is science of hiding information inside an innocent-looking carrier, mainly digital files such as image, audio, and video. The familiar idea has been used in spy or detective story, like the hidden envelope under a paint, last will inside a piano score, and many more.

Using the simplest and the most basic methodologies of steganography, this watermarking simulation project will explain how to hide message, in this case, a text, on innocent-looking image that no one will able to tell if someone had hide a secret message on it.

1.2 Scope

This project uses Java programming language on desktop considering the flexibility of further development of the watermarking application.

The following features of this application :

1. Encrypting text to image binary
2. Decrypting image binary to text

1.3 Objective

The objectives of this project are :

1. Convert image to binary to see the value of every pixels and change the value to 8 bits binary by padding (give some extras 0 on the front).
2. Convert text to binary to see the value of every character and change the value to 8 bits binary by padding (give some extras 0 on the front).
3. Hide the text inside the image by separating the 8 bits binary from the text to 1 bit and place it on the last or the rightest bit of 8 bits binary of every image pixels.