**CHAPTER I  
INTRODUCTION**

* 1. **Background**

Technology is developing very fast and dynamic with the time. Especially since internet born and makes us easy to share and search information around the world. The development of the internet provides the information that we need at present. Developments in technology can also help humans work quickly and effectively, therefore the technology is very important for the development of human life.

Every individual has the right and ability to interact with other individuals without any restrictions that may prevent it. Perfect globalization has actually been running in the virtual world that connects all digital community. Human life affected by the presence of the security data at this age, security data sector is the sector most affected by the development of information technology and telecommunications as well as the fastest growing.

High human needs to the future require people to continue developing the technology owned. Human create solutions to overcome many problems, and now appears an algorithm used for security applications, one of them is MD5 algorithm. The message digest algorithm takes as input a message of arbitrary length and produces as output a 128-bit fingerprint or message digest of the input, the MD5 algorithm is intended for digital signature applications, where a large file must be compressed in a secure manner before being encrypted with a private key under a public key cryptosystem.

* 1. **Writing Objective**

The intent and purpose of the paper is expected the readers know and understand the discussion of MD5 algorithm along with the implementation there in.

* 1. **Problem Domain**

In theory limitation, we limit the discussion of MD5 algorithm. The problem domain for this paper as follow:

1. Knowing the definition of encryption
2. Knowing the definition of MD5
3. Knowing the history of MD5 algorithm
4. Knowing the MD5 algorithm
5. Knowing how to work of MD5
6. Knowing the implementation of MD5
   1. **Writing Methodology**

The method used is the method of research with data collection techniques using observations from reliable media.

* 1. **Writing Framework**

To know the description of this paper, the authors divided it into five chapters. Each chapter in this study is interconnected between chapters with chapter one another by systematic writing as follows:

**Chapter I Introduction**

This chapter was published about the background of the problem, writing objective, problem domain, writing methodology, and writing framework.

**Chapter II Basic Theory**

This chapter describes the basic theory used to solve problems that would be presented, the detailed description of the MD5 algorithm used as the theme in this paper.

**Chapter III Problem Analysis**

This chapter describes the analysis of issues concerning MD5 algorithm, the comfort of what is presented by using MD5 algorithm, the implementation of MD5 algorithm, and any constraints contained in MD5 algorithm.

**Chapter IV Conclusion and Suggestion**

This chapter contains a description of the conclusions and suggestions were given by the author which is derived from the author's thoughts about the MD5 algorithm.