

**Universiti Teknologi MARA**

**Two Factor Authentication for Web Based System Using  
Graphical Password Approach**

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## **ABSTRACT**

Nowadays, many people have a problem using a traditional password which is commonly a text base password. This authentication method is proven to have several weaknesses. For example, the user that uses text-based methods has low privacy security where the user generally tends to select the password that is easier to remember and that gives rise to the password. This project aims to design Two factor authentication for Web Based systems using Text-based and Graphical password approach. This project was split into 5 phases: Planning, Literature Review, Requirement Gathering and Analysis, System Design and System Development. The users for this project will be people who want to secure their things, data on websites. Users will manage their data properly using this two-factor authentication project. Graphical password is one of several techniques that can secure the password. The requirement for this project was gathered by article and journal. This Graphical password also When this system was in testing phase, two students from Faculty Science Computer and Mathematics will test the system for effectiveness.

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# CHAPTER 1

## INTRODUCTION

This chapter will explain briefly about the overview of the project background. The topic included in this chapter is problem statement, objectives, scope, significance of the project and the conclusion.

### **Project Background**

Authentication is one of the important phases to secure the user account from being attacked by the threat. The password technique is used to achieve the authentication procedure. As we know, the approach in a few years ago is based on textual or known as alphanumeric password. To provide a secure authenticity, the password used must be strong and not a password that is easy to guess (Atish Nayak, 2016). For the password to be strong, the password combination needs to be long and using complex numeric, thus this will make it harder for the user to remember their password. And if the password is too short and easy to be remembering, it might be vulnerable to the attackers.

In the literature, several techniques have been proposed to reduce the limitations of alphanumeric password. One of the proposed solutions is to use graphical passwords, in which graphics (images) are used instead of alphanumeric passwords. This can be achieved by asking the user to select regions from an image rather than typing characters as in alphanumeric password approaches. Graphical passwords refer to using pictures (also drawings) as passwords. In theory, graphical passwords are easier to remember, since humans remember pictures better than words. Also, they should be more resistant to brute-force attacks, since the search space is practically infinite (Vikas, 2015).