

**UNIVERSITI TEKNOLOGI MARA**

**LOGIN AUTHENTICATION SYSTEM  
USING QR CODE**

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## **ABSTRACT**

With the rapid evolution of technology, login authentication is important to ensure the safety of wireless communication technology. Password will play an important role in the process of login authentication. In the process of authentication, password that has been entered by user will be transmitted with the traffic to the database server to allow the server to grant access to the authorized user. After the password is transmitted along the traffic, cybercriminal will try to search and find the network so that they can obtain the data that includes the user's password. By using a method called rainbow table, the cybercriminal will be able to trace the password with a hash algorithm to obtain the user's password. Once the password has been obtained, the cybercriminal is able to do illegal activities such as frauding others and this will cause the user to lose credit. The solution of this problem is using QR code so that users' personal accounts will be safe from any attempt by cybercriminal.

## TABLE OF CONTENTS

|                                 |            |
|---------------------------------|------------|
| <b>SUPERVISOR APPROVAL.....</b> | <b>ii</b>  |
| <b>STUDENT DECLARATION.....</b> | <b>iii</b> |
| <b>ACKNOWLEDGMENT .....</b>     | <b>iv</b>  |
| <b>ABSTRACT .....</b>           | <b>v</b>   |
| <b>TABLE OF CONTENTS.....</b>   | <b>vi</b>  |

### CHAPTER 1

|                                |   |
|--------------------------------|---|
| 1.1 Background of study .....  | 1 |
| 1.2 Problem statement.....     | 3 |
| 1.3 Objectives.....            | 3 |
| 1.4 Project Scope.....         | 4 |
| 1.5 Project Significance ..... | 4 |

### CHAPTER 2

|  |    |
|--|----|
| 2.1 Introduction .....   | 5  |
| 2.2 History .....  | 6  |
| 2.3 Overview .....   | 6  |
| 2.4 Technology.....  | 9  |
| 2.4.1 Websites .....   | 9  |
| 2.4.2 Operating Systems.....   | 9  |
| 2.4.3 Microsoft Windows .....  | 10 |
| 2.4.4 Programming Languages.....   | 11 |
| 2.5 Related Works.....   | 11 |
| 2.5.1 A Two-Factor Authentication System With QR Codes for Web and Mobile Applications (Mete Eminagaoglu, Ece Cini, Gizem Sert & Derya Zor, 2014)..... | 11 |

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Background of study**

Technology is defined as a set of knowledge, experience, skills and techniques which human change, transform and use our resources in order to create machines, tools, products and services that meet with our needs and desires (What-is.info). In this modern era, technology does play an important role in modernizing and improving the quality of countries. Countries that are expert in producing a great technology can gain many benefits from the technology itself such as the technology can help the countries arise as modern countries and helping the increase of the country's economy growth by providing the technology to other countries. Nowadays, technology in computer science are increasing rapidly in most major countries.

Authentication is one of the many technologies that is used widely in this modern era. This is because almost everyone will have their own personal account for business, media social and so on. According to Rouse (2014), authentication technology provides access control for systems by checking to see if a user's credentials match the credentials in the database server. There are five common authentication types that people used in their daily lives such as password-based, multi-factor, certificate-based, biometric and token-based authentication (Maayan, 2017).