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## CAPTHEAR – THE PRODUCT IDENTIFICATION MOBILE APPLICATION FOR BLIND

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# ABSTRACT

Blindness people are people who have vision problems. Based on the disabilities, there are few problems faced by this blindness people like had a tough time in reading and recognize things and do not have proper platform to help the blind people while shopping. So, this project is conducted to become a solution from those problems which is developing a mobile application for the Product Identification for Blind. The objective of this project is to identify the requirements of CaptHear mobile application, to design the CaptHear mobile application and to develop the CaptHear mobile application. The targeted users for this mobile application are blindness people who like to buy their goods product at Guardian. Unfortunately, this project also has the limitations which are it only built for users so there is no system for admin and this project only can be used at Guardian. Mobile Application Development Life Cycle (MADLC) is one of the methodologies used for completing this project. This project begins with identification phase until testing phase only. This product identification helps blind people to identify the goods product by scanning the barcode. They also can search what are the goods product was sold in the Guardian and they also can use Google Map to find the nearest Guardian from their places. For future recommendation, this project will spread the scope for all blindness people. Online shopping has been a key part of our shopping activity. It makes shopping moretime-saving and gives customers more choices. In conclusion, based on the interviews and research that I have done, it is hard for blindness people for buying what they want. Using the mobile application such as CaptHear will be very helpful for them.

**Keywords:** Blindness people, Product Identification for Blind, Mobile Application Development Life Cycle (MADLC)

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# CHAPTER 1

# INTRODUCTION

This chapter covers the project background, problem statement, objectives, scope and significance of the project.

## 1.1 Project Background

Eyes are our window to this world but not for people who had visual impairment from birth, disease, accident or old age (R. R. Lubis, E. R. Megawati L. D. Lubbis, 2017). Almost all of our daily activities need our sight to complete all tasks. Total or near total vision loss may be blindness. It can be congenital or inherited and may interfere with everyday life activities (Reddy, & Thevi, 2017). According to Braddy, Morris, Zhong, White and Bigham (2013), 5,329 blind people need help from other people to identify an object such as food, drink, medicine and money, read information or to recognize color. Blindness person need built-in accessibility features to help them navigate their cell phones because of the emergence of mobile phones on the market. They need to remember how the phone's keypad (Y. Rana, A. Omar and A.L. Murad, 2013). When the emergence of touch screens was popped out, the situation be more difficult because before this all the input can be done using the keyboard or keypad. It was a good situation for blind person. Even though the blind people had a screen reader in their smartphone but they faced difficulties on entered the information and communicated with their smartphone (J. Oliveira, T. Guerreiro, H. Nicolau, J. Jorge and D. Goncalves, 2011).

On the other hand, the creation of assistive technologies that make use of the camera. A number of people with vision impairments have embraced smartphones (Hernisa, Kris, Jeffrey & Chieko, 2017). According to Azenkot, Rector, Ladner and Wobbrock (2012), modern touch screen smartphones have become more common with blind and visually impaired people after screen reading apps such as Talkback (Google's Eye-Free, 2009) or VoiceOver (iOS, 2009) was included.