Abstract

Locker is a place to store various items. In general, locker uses conventional key that have several shortcomings such as easily duplicated and damaged. This causes theft because when the locker is left without being locked. To solve this problem, Radio Frequency Identification (RFID) is applied to the locker which aims to improve system security by applying the SHA-256 algorithm. By using RFID, user only need to hold the tag closer to the reader so the locker can be opened without using conventional key. The application of the SHA-256 algorithm to the UID tag generates a message of 64 hexadecimal bits which will minimize the occurrence of duplicate IDs. The result obtained in the testing of RFID functionality is that the RFID reader works well on tag reading with a distance of 1 cm to 2 cm with an accuracy of 100%.

Keywords: SHA-256 Algorithm, RFID(Radio Frequency Identification)