

ABSTRACT

Locker is a public facility for storing items that are often found in public places. However, the locker still uses a conventional key so it is very unsafe and unhygienic because it is used by many people in turn, especially during the COVID-19 pandemic where the virus is very vulnerable and sensitive to physical touch. During the pandemic, it also has a big impact, especially in terms of the economy because many businesses have gone bankrupt and also many people have lost their jobs. Therefore, an innovation is needed that can reduce the spread of COVID-19 on the use of lockers in public places and simultaneously can create new business areas that can be useful to help improve the economy during the pandemic.

Based on this, in this research, a smart locker that is integrated with e-money will made. The smart locker later will be connected and fully controlled through an application that supported by an internet of things system to replace conventional locks as to reduce physical contact between users. With the application that is integrated with an e-money payment gateway, users can rent any available lockers by using the cashless payment method.

The results obtained from this research show that all the features used in the smart locker system can work well, especially on the security system of the magnetic switch sensor and the implementation of cashless payments using e-money which can also work properly. According to the results of the Quality of Service testing carried out, the performance of the device functionality can be affected by the distance where the farther the device is from the access point, the slower the device will respond and process commands given by the user. So it can be concluded that the device requires a very close distance to the access point so that the system can work optimally.

Keywords: Covid-19 Pandemic, E-Money, Internet of Things, Locker