INTRODUCTION

There have been many studies using the protocol withthe principle of publisher and subscriber. A protocol is a set of rules and guidelines for communicationbetween data in every step and process of communication to successfully exchanging various messages.The use of protocols does not have a clear standard. However, if one chooses, it will have a significant influence on the exchange of data that occurs, and if theuse of the protocol is not following the requirements will result in fatal events in the ongoing exchange of data. One of the most popular protocols is the MQTT protocol. MQTT is commonly used for data exchangein the world. almost all sectors use it, such as industry,security, business (Kodali and Gorantla, 2017) (Perrone et al., 2017) (van der Westhuizen and Hancke,2018) (Pereira et al., 2019) (Imane et al., 2018) , andhealth data is no exception (Sarierao and Prakasarao,2018) (Terry and Francis, 2007). Health data is essential because it requires continuous reliability, safety, and availability in the aspect ofdata queue for a medical recap because the exchange of data in health requires proper treatment for suc-cessful treatment (Das and Ari, 2014) .Not all health data have lightweight data exchangeto be sent at one time, there are also large and busydata, for example, an electrocardiogram (ECG). An ECG is a recording of the electrical activity of theheart, which provides essential information about thecondition of the heart. ECG heartbeat detection isneeded to diagnose heart disease in the early stages(Naik, 2017). ECG has extensive data and real-time.Therefore, this study will compare communicationprotocols other than MQTT. The MQTT protocol isone of a machine to machine communications that isnot suitable if it uses in real-time in large amounts ofdata. Because in the MQTT Protocol, there are deficiencies in terms of data transfer capacity. AMQPis an open-source protocol that provides features suit-able for high requirements. The use of appropriate protocols is one of the crucial things in the case studies raised (Jaikar and Iyer,). AMQP has succeeded in becoming a superior communication protocol in the banking sector. The banking sector requires excellent communication for high-size activities with essential and sensitive data (Anusha et al., 2017). The similarities of the health sector, making AMQP a feasible protocol to be the proposed protocol and compared with MQTT. Therefore, the AMQP Protocol has a vital role in the reliability, security provision, and high level of data interoperability.