ABSTRACT

Epilepsy is defined as a collection of clinical signs and symptoms that arise due to intermittent disturbance of brain function, which occurs as a result of abnormal or excessive electrical discharges from paroxysmal neurons with various etymologies. One of the tests that helps diagnose epilepsy is the recording of the electroencephalogram (EEG). However, this process requires a lot of time to coordinate data related to epilepsy. In this study implemented a system that works by processing the signals that appear through the EEG process using the methods contained in . This system is based on a website that helps distribute information to doctors so that they can immediately take action so that people with epilepsy get services quickly. The e-health system is built on a website basis using the Laravel and Bootstrap frameworks. On the website there are features including patient data access menus, EEG data, and patient notes. The website access process in the internet network is secured using firewall rules that are set as needed. A firewall-based security system with OPNSense tools uses pass rules on the LAN network and uses port 8080 in the NAT settings. In the signal processing section using the MATLAB application. In processing the EEG signal for signal processing using the SVM classification where this SVM determines normal or seizure EEG signals which will be processed in Matlab, after processing it produces three datasets between 2D plots, multichannel plots and notepad.txt where the dataset is uploaded to the website for use by doctors to diagnose disease epilepsy. Merging between websites with signal processing is done using mysql. In calling data on the website using phpMyAdmin which is remote by the mysql website, where the mysql website is connected to the mysql workbench, and the mysql workbench is connected to mysql. In this study, website testing was carried out using blackbox testing and firewall testing was carried out using LOIC.

Keywords— Epilepsy, EEG Signal, , Website, Firewall