ABSTRACT

Recognition technology of a person's identity has increasingly developed, one of which is on fingerprint identification. This is used as an effort to secure data held through identity recognition, so that other people do not carelessly access the data. In its application, fingerprints are carried out by people who have normal fingers. However, people who have abnormal fingers or distorted fingers have difficulty using fingerprints. Therefore, a distorted fingerprint can be accessed if the system is given a command to detect a distorted fingerprint. This final project discusses the introduction of fingerprints of both normal and distorted fingers (dry skin, cracked skin, and oily skin) with the SIFT-based Minutiae Descriptor (SMD) method and the Brute Force Matching (BF Matcher) method. The test results show a distorted fingerprint recognition system using the SIFT Based Minutia Descriptor (SMD) Algorithm and Brute Force Matching in ideal conditions with an accuracy level of 80.42%. The system can recognize a distorted fingerprint with an average time of fingerprint image recognition with a response time of 13.58 *seconds per subject.*

Keywords: *BFMatcher, fingerprint, distorted fingerprint, SIFT based Minutia Descriptor.*