

The main goal of this thesis is to provide full description of an implementation of an application that is supposed to be a complex dactyloscopic database tool. The text is divided into parts according to the functional blocks of the application. The parts are namely processing of input fingerprint, the minutiae point analysis, the description of minutiae representation, the database and index structure described with its operations. Usually we describe multiple algorithms for a single task. In this case we provide their comparison. At the end of this thesis, there is a user manual describing the main usage scenarios.