

BABEŞ–BOLYAI UNIVERSITY OF CLUJ-NAPOCA  
FACULTY OF MATHEMATICS AND INFORMATICS  
SPECIALIZATION: COMPUTER SCIENCE

**Diploma Thesis**

**Secure document-handling application**

**Abstract**

**EZ AZ OLDAL NEM RÉSZE A  
DOLGOZATNAK!**

Ezt az angol kivonatot külön lapra kell nyomtatni és alá kell írni!

**A DOLGOZATTAL EGYÜTT KELL  
BEADNI!**

Kötelező befejezés:

This work is the result of my own activity. I have neither given nor received unauthorized assistance on this work.

2021

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# **Secure document-handling application**



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FACULTATEA DE MATEMATICĂ ȘI INFORMATICĂ  
SPECIALIZAREA INFORMATICĂ

Lucrare de licență

# Aplicație de gestionare securizată a documentelor



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LECTOR DR. KOLUMBÁN SÁNDOR

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BALÁZS MÁRK

2021

BABEŞ–BOLYAI TUDOMÁNYEGYETEM KOLOZSVÁR  
MATEMATIKA ÉS INFORMATIKA KAR  
INFORMATIKA SZAK

Szakdolgozat

# Biztonságos dokumentum-kezelő alkalmazás



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2021

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## **1. Chapter**

# **Introduction**

### **1.1 About the application**

A brief introduction of the application, 1-2 pages.

### **1.2 Similarities in the field**

A list of similar applications, their advantages and disadvantages, comparisons, 2-3 pages.

### **1.3 Summary**

Describes the structure of the following document, 1 page.

## **2. Chapter**

# **Basics**

*Summary: In this chapter I describe the application from a user point of view.*

## **2.1 General outlook**

Here I describe the visuals of the application with images, 2-3 pages.

## **2.2 Feature-showcase**

Here I talk about the features of the application, 2-3 pages

## 3. Chapter

# Implementation

***Summary:** This is the summary of the chapter where I describe the general form-factors of the application from a technological standpoint.*

## 3.1 Technologies

Here I list the technologies used for building the application with logos, descriptions for each, 6-7 pages.

## 3.2 Architecture

In this section I describe the architecture with multiple diagrams, 4-5 pages.

## 3.3 Security

Here I describe the Diffie-Hellman key exchange and the used encryption techniques in more detail, 3-4 pages.



## 4. Chapter

# Results and evaluation

*Summary: In this chapter I describe decisions I made, difficulties I faced during development and the quality of my code.*

## 4.1 Metrics

In this section I will evaluate some of the algorithms used in the application, test coverage, code analysis. 4 pages

## 4.2 Decisions

Here I describe decisions I made about what technologies to use and how can they be replaced with other ones. 3-4 pages

## 4.3 Obstacles and difficulties

In this section I contemplate about different parts of the applications that were problematic to develop. 3 pages

## 4.4 Possibilities

Here I describe possible features, future upgrades for the app. 1-2 pages

## 4.5 Retrospective

In this section I review the development process and describe what would I do differently and why. 1-2 pages