



University of Klagenfurt



## Bachelor Thesis

Study Program: Applied Informatics

**Topic:** <Topic name>

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## Abstract

Here goes the English text which summarizes the content of the thesis...

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## List of Listings

# 1 Introduction

This section gives an introduction to the problem and sketches the resulting solution, i.e. the GitRepoMonitor. The focus lies on WHY this tool is required and which problems / inconveniences it solves. “The goal of this thesis is to show how multiple GIT repositories can be efficiently and securely **updated** using a single passphrase.”



## 2 Basics [Title WIP]

This section provides the necessary background knowledge for the reader to be able to comprehend the rest of this thesis. [The contents of this section may change based on the requirements for the rest of the thesis.]

### 2.1 Software Engineering Process

Describe how software is developed and explain how a typical development lifecycle works (Requirements, Design, Implementation, Test, ...). Provide examples of how build tools like gradle can aid this process. [Is this necessary for this thesis? Is this “Software-Engineering im engeren Sinne”?]

### 2.2 Graphical UI Programming

Describe how GUIs are implemented (i.e. asynchronous manner using events) with specific focus on JavaFX (resource files, MVC).

### 2.3 Security Basics

Detail what security means in the context of IT and explain how data, in this case credentials, can be securely stored. Furthermore, describe AES and its parameters, highlighting requirements and security benefits.

## 3 Implementation

This section is the core of this thesis, detailing the GitRepoMonitor the tool and its concrete implementation. [This section may be split into different sections - for now this structure seems fitting.]

### 3.1 Functional Description

Present the resulting tool and its features (scan PC, manage repos in list, commit log, show details, pull changes, credentials).

### 3.2 Software Architecture

Provide an overview of how the tool is internally structured modules, packages, files. Includes UML diagrams to provide a quick overview.

### 3.3 Credentials Management

Describe the mechanism used for storing credentials i.e. concrete implementation, also mentioning possibility of detachable storage.

### 3.4 Graphical User Interface

Discuss the interesting parts of the GUI implmentation. This includes the custom commit log display, the background repo scanner, etc.

## 4 Conclusion

Discuss how the tool turned out, which challenges were overcome during development and what considerations had to be made. Finally, give a prospect of which features could be added or improved.

## Bibliography

- [Mus05] MUSTERFRAU, Maxi: *Ein weiteres Beispielbuch*. <http://www.example.com>.  
Version: 08 2005
- [Mus09] MUSTERMANN, Max: *Ein Beispielbuch*. <http://www.example.com>.  
Version: 11 2009

## Anhang

Der Anhang bestehend aus Bildern und Texten...



Figure 1: Abbildung im Anhang

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## Eidesstattliche Erklärung

### Eidesstattliche Erklärung zur <-Arbeit>

Ich versichere, die von mir vorgelegte Arbeit selbstständig verfasst zu haben. Alle Stellen, die wörtlich oder sinngemäß aus veröffentlichten oder nicht veröffentlichten Arbeiten anderer entnommen sind, habe ich als entnommen kenntlich gemacht. Sämtliche Quellen und Hilfsmittel, die ich für die Arbeit benutzt habe, sind angegeben. Die Arbeit hat mit gleichem Inhalt bzw. in wesentlichen Teilen noch keiner anderen Prüfungsbehörde vorgelegen.

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