**Lessons Learned**

**Code Crate**

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**Table of Contents**

[Introduction 2](#_heading=h.gjdgxs)

[Lessons Learned Approach 3](#_heading=h.30j0zll)

[Lessons Learned from this Project 3](#_heading=h.1fob9te)

[Lessons Learned Knowledge Base / Database 4](#_heading=h.3znysh7)

[Process Improvement Recommendations 4](#_heading=h.2et92p0)

# Introduction

This document is jointly written by the team to record the lessons we have learned. This document is made available to anyone who may wish to utilize our repository for Code Crate for private use or commercially.

# Lessons Learned Approach

The various lessons listed here are written by the members of the Code Crate development team. one of the goals we hope to achieve with this document is to inform interested developers on what we’ve encountered so that they don’t repeat any of the mistakes we made.

# Lessons Learned from this Project

The following table lists the major lessons learned both as a group and individually during this project's seven week development cycle. The lessons within the table have not been sorted in any particular order.

| Category | Issue Name | Problem/Success | Impact | Recommendation |
| --- | --- | --- | --- | --- |
| File I/O | Character incompatibility | Switched the unicode encoding for the CSV’s from UTF-8 to UTF-16 | Changing the file encoding allowed for the application of bitwise rotation of password characters. | Ensure the csvWriter opens the database flat file with UTF-16 for compatibility with <char>’s full character set. |
| Database | Encryption updates | When updating the encryption methods, no solution was developed to update the database to work with the new cipher | The database would have to start anew every time the cipher was updated | Implement a solution that decrypts the database using the previous cipher and encrypts with the new one. |
| Scope | Feature creep | Previous ideas for one time password and email verification had to be set aside. | This reduced the number of features we could include within the projects timeframe | Investigate the potential development time for any and all features before considering them for implementation |
| Personel | Training/knowledge | Not everyone having the same level of understanding of certain aspects | Made independent work more challenging, having to lean on group work so area could be explained | Take time before beginning the project to go through basics to unify understandings of new systems |

# Lessons Learned Knowledge Base / Database

We did not commit any further knowledge to writing during development. We apologize for the inconvenience.

# Process Improvement Recommendations

During the semester, our team was introduced to documents like these every two weeks. Our team believes that some of the documents, like this one, would benefit from being introduced earlier in the semester and that they be kept up to date on a weekly basis.