

TxtEncrypter

2.0

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Contents

Chapter 1

TxtEncrypter Documentation

Encrypt your text files by choosing two numbers to seed a random number generator. Each character in your text file will be encrypted using those seeds you pick, meaning that your file can only be decrypted using the same seeds. In a sense, those two seeds are two numerical passwords which are used to access your files. My use case for this program is for encrypting a text file containing all of my passwords and sensitive data – this way I can keep my passwords file in plain view without having to worry about others stealing my passwords

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

[DecoderRing](#)

This class generates a decoder ring using two seeds for `std::default_random_engine` ??

Chapter 3

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

DecoderRing.cpp	??
DecoderRing.h	??
encrypt.cpp	??

Chapter 4

Class Documentation

4.1 DecoderRing Class Reference

This class generates a decoder ring using two seeds for `std::default_random_engine`.

```
#include <DecoderRing.h>
```

Public Member Functions

- [DecoderRing](#) (unsigned int seed1, unsigned int seed2)
- unsigned int [getValue](#) (unsigned int i)

4.1.1 Detailed Description

This class generates a decoder ring using two seeds for `std::default_random_engine`.

4.1.2 Constructor & Destructor Documentation

4.1.2.1 DecoderRing::DecoderRing (unsigned int *seed1*, unsigned int *seed2*)

Constructor for generating the decoder ring

Parameters

<i>seed1</i>	is the first seed used by the random engine
<i>seed2</i>	is the second seed used by the random engine

4.1.3 Member Function Documentation

4.1.3.1 unsigned int DecoderRing::getValue (unsigned int *i*)

Return the value of the inner ring corresponding to the outer ring

Parameters

<i>i</i>	is the ASCII value of the character in the outer ring to lookup
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Returns

The ASCII value of the corresponding character in the inner ring

The documentation for this class was generated from the following files:

- [DecoderRing.h](#)
- [DecoderRing.cpp](#)

Chapter 5

File Documentation

5.1 DecoderRing.cpp File Reference

```
#include "DecoderRing.h"
```

5.1.1 Detailed Description

Author

Matthew Chan

Date

7/19/2016

Version

0.1

5.2 DecoderRing.h File Reference

```
#include <random>
#include <vector>
#include <algorithm>
#include <functional>
#include <map>
```

Classes

- class [DecoderRing](#)

This class generates a decoder ring using two seeds for `std::default_random_engine`.

5.2.1 Detailed Description

Author

Matthew Chan

Date

7/19/2016

Version

0.1

5.3 encrypt.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <sstream>
#include <windows.h>
#include <iomanip>
#include <string>
#include "DecoderRing.h"
```

Functions

- void [readSeeds](#) (unsigned int &seed1, unsigned int &seed2)
- bool [openFile](#) (std::ifstream &file, std::string filepath)
- std::ostringstream [encryptFile](#) (std::ifstream &file, [DecoderRing](#) decoder_ring)
- void [hideConsoleInput](#) (HANDLE &hStdin, DWORD &mode)
- void [showConsoleInput](#) (HANDLE &hStdin, DWORD &mode)
- void [printHeader](#) (std::string header, unsigned int width, char fillChar)
- int **main** ()

5.3.1 Detailed Description

FileEncrypter**Author**

Matthew Chan

Date

7/19/2016

Version

0.1

Encrypt your text files by choosing two numbers to seed a random number generator. Each character in your text file will be encrypted using those seeds you pick, meaning that your file can only be decrypted using the same seeds. In a sense, those two seeds are two numerical passwords which are used to access your files. My use case for this program is for encrypting a text file containing all of my passwords and sensitive data – this way I can keep my passwords file in plain view without having to worry about others stealing my passwords

5.3.2 Function Documentation

5.3.2.1 `std::ostringstream encryptFile (std::ifstream & file, DecoderRing decoder_ring)`

Encrypt each character in the file and write the contents to an output string stream

Parameters

<i>file</i>	is the text file
<i>decoder_ring</i>	is the decoder ring

Returns

The encrypted/decrypted version of the file as a stringstream

5.3.2.2 `void hideConsoleInput (HANDLE & hStdin, DWORD & mode)`

Function that hides user typing in console

5.3.2.3 `bool openFile (std::ifstream & file, std::string filepath)`

Open an input file stream to a file and check if the file was successfully opened

Parameters

<i>file</i>	is the input file stream used to open the text file
<i>filepath</i>	is the absolute path to the text file

Returns

Whether the file was successfully opened or not

5.3.2.4 `void printHeader (std::string header, unsigned int width, char fillChar)`

Print out an ASCII header

Parameters

<i>header</i>	is the message to display in the terminal
<i>width</i>	is the row width to print out
<i>is</i>	the character used to surround the header

5.3.2.5 void readSeeds (unsigned int & *seed1*, unsigned int & *seed2*)

Read seeds for the default_random_generator from the user

Parameters

<i>seed1</i>	is the first seed inputted by the user
<i>seed2</i>	is the second seed inputted by the user

5.3.2.6 void showConsoleInput (HANDLE & *hStdin*, DWORD & *mode*)

Function to show user typing in console