

Bonus assignment 5: Crack the code

Course ‘Imperative Programming’ (IPC031)

1 Assignment

On Brightspace you find the file “`assignment-05-bonus-files.zip`” that contains a text file “`secret.txt`” that is encrypted with OTP using a secret initializing value R . It is your task to design and implement a program that decrypts this text file and uncover what value R has been used. The name of the decrypted text file must be “`source.txt`”. The only information known about the source text is that it is written in English.

2 Products

As product-to-deliver you only need to upload the following documents:

- Your implementation of the algorithm in “`main.cpp`”.
 - Every function must be documented with preconditions given as `assert` statements and postconditions given as comments.
 - In addition, we want to know which secret number R was used to produce the encrypted text file “`secret.txt`”. Include this information in your “`main.cpp`” as a comment.
- Additional unit tests in “`main_test.cpp`”, if applicable.
 - Consider testing auxiliary functions.
 - Consider testing if your solution produces the correct R once you have identified it.

Deadline

Bonus assignment: Monday, October 9, 2023, 15:30h

Important

From now on, in all assignments, including the bonus, you must document every function with preconditions and postconditions. This message will not be repeated in later assignments.