Cryptography App Documentation

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Module gui

Classes

```
Class Ui_main_window class Ui_main_window
```

Methods

Method decrypt

```
def decrypt(
    self
)
```

Function associated with self.decrypt_button. Takes input from self.file_localization_line_edit_2, self.key_localization_line_edit. Reads headers from the file and decrypts it. The created output file is stored in the same directory as the ciphertext file.

Method encrypt

```
def encrypt(
    self
)
```

Function associated with self.encrypt_button. Takes input from self.file_localization_line_edit, self.algorithm_type_combobox and self.key_len_combobox. Encrypts the file and adds a header with the information needed for decryption. If the file is an image, an encrypted preview of the file is created. The created optional preview with the key and ciphertext is stored in the same directory as the input file.

Method get_file_to_decrypt

```
def get_file_to_decrypt(
    self
)
```

Function associated with the self.file_selector_button_2. Opens a dialog to select the input file to be decrypted.

Method get_file_to_encrypt

```
def get_file_to_encrypt(
    self
)
```

Function associated with the self.file_selector_button. Opens a dialog to select the input file to encrypt.

Method get_key_to_decrypt

```
def get_key_to_decrypt(
    self
)
```

Function associated with self.key_selector_button. Opens a dialog box to select the input key to decrypt.

Method modify_ct

```
def modify_ct(
    self
)
```

The function to modify a ciphertext. The ciphertext localization is obtained via self.file_localization_line_edit_2. For every single byte of the ciphertext there is a 33% chance that it will be modified. The modification is performed as the XOR product of a given byte and a randomly generated byte.

Method retranslateUi

```
def retranslateUi(
    self,
    main_window
)
```

$\textbf{Method} \ \mathtt{setupUi}$

```
def setupUi(
    self,
    main_window
)
```

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