# MonieCrypt Technical Report

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## What is MonieCrypt

MonieCrypt is a cryptography tool that supports Monoalphabet cipher with both old and new implementations. Where the old implementation refers to the well-known substitution technique , and the new is explained in the Cipher Report.

## Language Used

MonieCrypt is implemented using Pyhton along with the following packages

```
click        : shell support
SpecialPurpose : customized package for special purpose functions
```

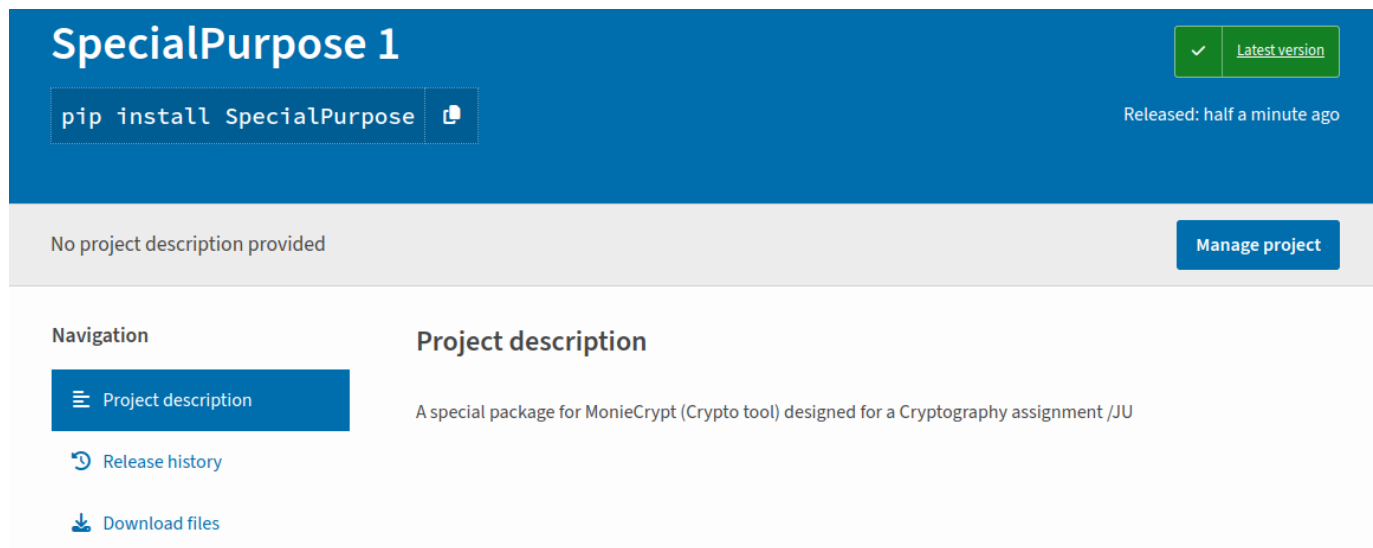The SpecialPurpose package is self-written and has all the required functions.



Figure 1: *PYPI*.

## Intallation

To run the code , use **pip install SpecialPurpose** to obtain the dependency package and start working.

## Workflow

The main idea is to run a shell with the following logic flow :

- You are welcomed with a banner

- Use (help) command to display the manual

- Enter the desired command

- Enter (exit) to exit the shell

## Functionality

### Encryption

Given the PlainText file name and a key.

### Decryption
**With a Key**

Given the CipheredText file name.

**Without a Key**

Given the CipheredText file name it does a unigram frequency analysis .

### Frequency Analysis

Given the CipheredText file name and the gram size (Bigram/Trigram) , return a frequency table. in addition to performing frequency analysis attack.

### Miscellaneous
**cat**
    displays file contents
**clear**
    clears the screen
**autocompletion**