Encryption Algorithm

Test Documentation

Jamie Irvine 50103233

## Test Cases

| **Test Case** | **6 Character Key** | **Message (m)** | **Padded message split into subsequence of 8** | **Shift value 1 and expected result** | **Shift value 2 and expected result** | **Expected final output** | **Actual output** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 123456 | This is a test message | "This is "  "a test m"  "essageaa" | (49+50) MOD 8 = 3  " is Thi"  "st ma te"  "gaaesse" | (51+52) MOD 3 = 1  "gaaesse"  " is Thi"  "st ma te" | eaaessagis This t ma tes | eaaessagis This t ma tes |
| 2 | testkeytoolong | test | testaaaa | (116+101) MOD 8 = 1  “atestaaa” | (115+116) MOD 3 = 0  “atestaaa” | atestaaa  \*expected error due to key being too long | atestaaa  \*no error given regarding key length |
| 3 | testkeytoolong | test | N/A | N/A | N/A | ValueError("Key must be 6 characters long.") | ValueError("Key must be 6 characters long.") |
| 4 | 123456 | (no input) | N/A | N/A | N/A | (empty string) | (empty string) |
| 5 | Test05 | TheQuickBrownFoxJumps | "TheQuick"  "BrownFox"  "Jumpsaa" | (84+101) MOD 8 = 1  "kTheQuic"  “xBrownFo”  “aJumpsa” | (115+116) MOD 3 = 0  "kTheQuic"  “xBrownFo”  “aJumpsa” | kTheQuicxBrownFoaJumpsa | kTheQuicxBrownFoaJumpsa |

## Screen Dumps

**Test Case 1**

A screen shot of a computer code

Description automatically generated

**Test Case 2**

A screen shot of a computer code

Description automatically generated

As seen above, program accepts a key that is longer than 6 characters. To resolve this, I will add a line to my function which verifies the key length using the len function.

**Test Case 3**

To resolve error discovered in Test 2, I added the below line to my code. I then ran Test 2 again and received error as expected.

A black screen with white text

Description automatically generated

A screen shot of a computer

Description automatically generated

**Test Case 4**

A screen shot of a computer

Description automatically generated

No message was entered, as expected output was empty as there was no inputted message to encrypt.

For future development I may look at adding a message which prompts user to input a message if they do not initially input anything.

**Test Case 5**

**A screen shot of a computer code

Description automatically generated**