ISTM233P: Lesson 5 Assignment
Decrypt an Encrypted Message

Background:

The purpose of this lab is to expand upon the various cypher techniques described in the lecture.

> Note:
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> Doing a simple Google-search will reveal a number of different techniques which will solve this lab problem. Students have permission to use *any cypher solution* so long as the correct results are produced.

Instructions:

You have captured an encrypted message from the enemy.

Decrypt this message: **FSkkYRMgKC9hKC9hEjEgKC9hMjUgODJhLCAoLy04YS4vYTUpJGExLSAoL2A=**

Total Knowledge:

You have "Total Knowledge" of the following:

- This message was created using an XOR cypher in Python 2
- The original key in unknown, but you suspect that the key is a single upper-case character
- You can assume that the initial character set is base64

Required:

Create a loop that will run the encrypted message through a decryption program looping through a list of single-character, upper-case English letters.

Output Results:

Your output should demonstrate that your program used the provided test data and created the correct solution. Output results shall be easy to interpret and will demonstrate the program looping through all possible shifts.

Output should demonstrate running through a character list of possible keys and the decryption results. This will produce a list of 26 lines with output similar to:

```
The encrypted message is: [the encrypted text]

For key [A] the result is: [decryption results]
For key [B] the result is: [decryption results]
… etc.
```

> Note:
>
> This is an all-or-nothing lab. Only the complete and accurate solution will be accepted for grade. There will be no partial credit for incomplete results.

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Note:

As it is possible that students will share the solution, accurate demonstration of the operations of this lab are *required* for grade.

Submission

Follow the instructions in the video "How to submit homework" to complete your homework solution.

Save this document for your records.

Remember, your Python code MUST have your name and identification banner as described in the lectures.

Value

This assignment is worth 50 points. No partial credit is available for this lab.

Note: This document was checked for ADA Accessibility on July 29, 2020

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