Project Report

Spring 2025

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Project:

Note: As you write each section, try to be as clear and detailed as possible. Your goal is to communicate your thought process and work clearly. Don't worry if you faced challenges or made mistakes; discussing these is a valuable part of learning and shows your problem-solving skills! Remember, there's no single 'right' way to do these tasks, so be creative and honest in your responses.

Problem Statement (2-3 Paragraphs):

The goal of the assignment was to decode a message encoded by the user using Caesar cipher and shown through ASCII numbers. The program asks the user for the number of letters in message, shift value, and ASCII value for each letter. Each character was then shifted accordingly.

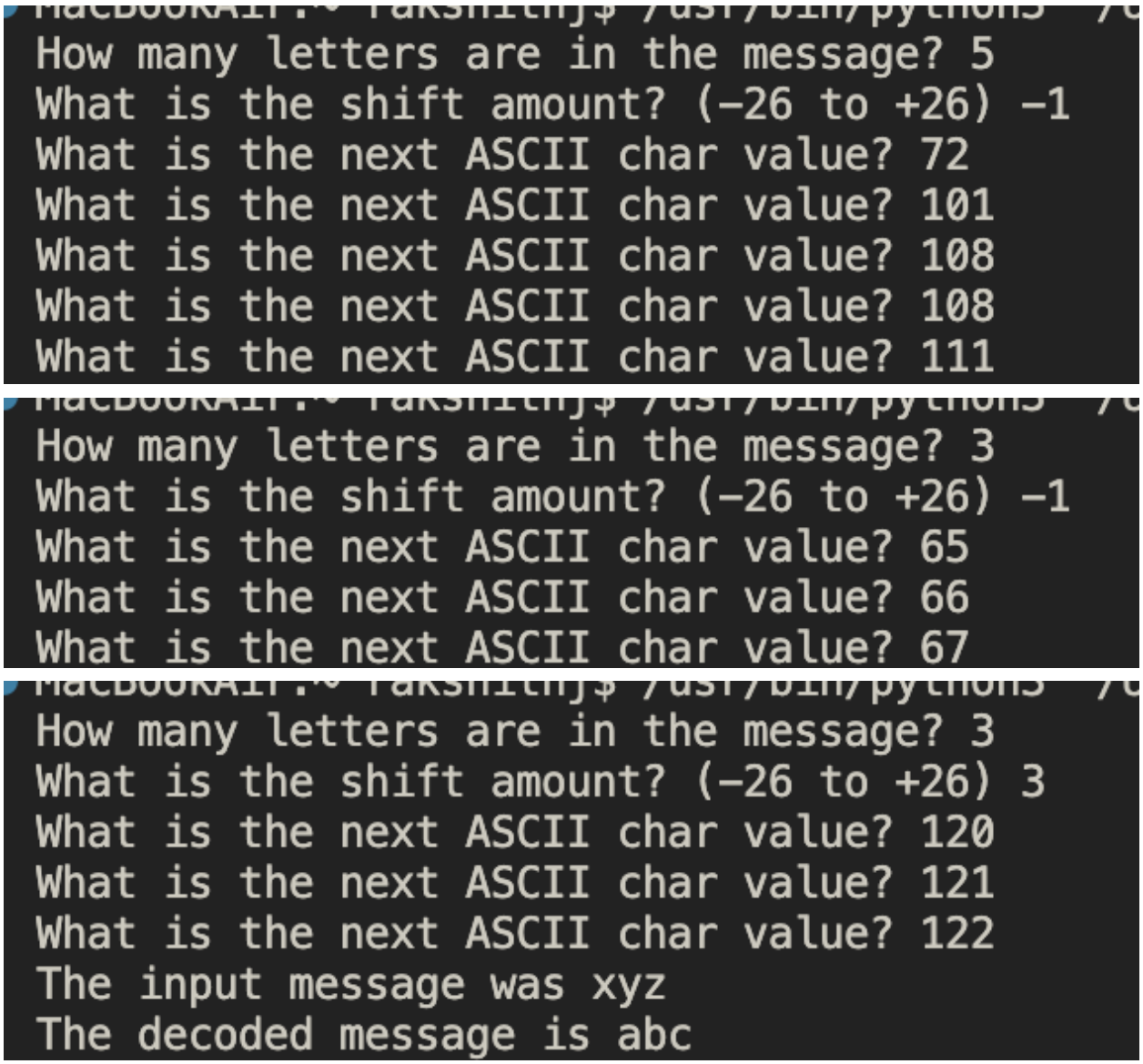
The inputs to the program are the number of letters, the shift amounts, and the ASCII values. The output is the decoded message. I was told to assume the user would enter valid numbers, so I didn’t incorporate error handling.

Design (1-3 Paragraphs):

I made two empty strings for original message and decoded message. I used a loop to process the values and converted and shifted using the chr() and ord() functions. I added wraps so the values go back or forward based on where it is. I think the design was simple and clear but the object was slightly hard especially only using basic loops and conditional statements.

Testing (1-2 Paragraphs + screenshots of 3 test cases):

I tested the program using normal and edge inputs to make sure it was working like expected. For regular inputs, I just used the test case that was provided which was matched. Then for special cases I did the edge letters making sure the warping works. In every case, my program worked as expected.



Conclusion (1 paragraph)

I think the project was successful because the program decoded the messages properly for everything. I learned how to work with ASCII values and how to use the ord() and chr() functions in python. If I did it again I wouldn't change much except for making the code simpler for programmers to use because I think overall it was a pretty simple and effective program.