1. What are the most challenging aspect of the coursework task?

ANS: Understanding the Caesar Cipher: The Caesar Cipher is a simple encryption technique that involves shifting each letter in the message by a certain number of positions in the alphabet. It may take some time to fully understand how it works and how to implement it in code.

Error handling: The code provided doesn't have extensive error handling, which could be a potential challenge. If the user inputs an invalid mode or key, the program may crash or produce unexpected results. Implementing robust error handling can be time-consuming but is important for ensuring the program runs smoothly.

Testing: Testing the program thoroughly to ensure it works correctly in all scenarios can also be a challenge. It's important to test edge cases and input values that may break the program to ensure it's robust and reliable.

2. How did you go about completing the task?

Ans: The program functions by prompting the user to input a message and a key, after which the user can choose whether to encrypt or decrypt the message. Once the encryption or decryption is complete, the result is displayed. This process can be repeated multiple times using the application.

As long as the user provides valid inputs for the message and key, the implementation of the Caesar Cipher is straightforward and effective. However, the application could be improved by allowing users to input keys as letters, in addition to numbers. Additionally, implementing more robust error handling to handle incorrect user inputs would enhance the overall usability of the program

3.What have you learned over the course of completing this coursework task?

Ans: After Completing a task like this can help you understand the basics of cryptography and the Caesar Cipher. You'll learn how to implement the encryption and decryption process, understand how the key affects the output, and how to handle user input.

Additionally, working on this task can help you develop problem-solving skills as you work through the code and debug any issues that arise. It can also help you practice writing clean and well-organized code that is easy to read and understand.

Overall, completing this task can be a great way to start learning about cryptography and programming, and can provide a solid foundation for further exploration into these fields.