Task 01-Implement Caesar Cipher

```
def caesar_cipher(text, shift, mode='encrypt'):
 """
 Encrypts or decrypts a message using the Caesar Cipher.

 Args:
  text: The message to be encrypted or decrypted.
  shift: The number of positions to shift the letters.
  mode: 'encrypt' for encryption, 'decrypt' for decryption (default: 'encrypt').

 Returns:
  The encrypted or decrypted message.
 """

 result = ""
 for char in text:
  if char.isalpha():
   # Determine the starting alphabet (A or a)
   start = ord('A') if char.isupper() else ord('a')
   # Calculate the shifted position
   shifted_pos = (ord(char) - start + shift) % 26 + start
   result += chr(shifted_pos)
  else:
   result += char
 return result
```

```
if __name__ == "__main__":
  message = input("Enter the message: ")
  shift = int(input("Enter the shift value: "))
  mode = input("Enter mode (encrypt/decrypt, default: encrypt): ") or 'encrypt'

  if mode.lower() == 'encrypt':
    encrypted_message = caesar_cipher(message, shift)
    print("Encrypted message:", encrypted_message)
  elif mode.lower() == 'decrypt':
    decrypted_message = caesar_cipher(message, -shift)  # Decryption uses negative shift
    print("Decrypted message:", decrypted_message)
  else:
    print("Invalid mode. Please enter 'encrypt' or 'decrypt'.")
```