# CS 305 Module Five Coding Assignment Checksum Verification Template

## Instructions

Using the instructions from theModule Five Coding Assignment Checksum Verification Guidelines and Rubric, replace the bracketed text with the relevant information in your own words.

## Algorithm Cipher

Based on the scenario, SHA-256 (Secure Hash Algorithm) is the best choice for the encryption algorithm.

## Justification

The SHA-256 algorithm is a well-regarded and secure cryptographic hash function that reliably generates a 256-bit (32-byte) hash value. As a one-way function, it is virtually impossible to reverse-engineer the original input data from the hash value. Moreover, SHA-256 is specifically designed to prevent collisions, which is essential for ensuring data integrity and security. A collision happens when two distinct input values produce the same hash output, which can undermine the security and reliability of the data. The impressive capability of SHA-256 to avoid collisions makes it an exemplary choice for generating checksums in public key verification.

## Generate Checksum

You’ll submit your refactored code to your instructor. Your instructor will review it and this document.

## Verification

Insert a screenshot below of the web browser with your unique information.

A black and white screen

AI-generated content may be incorrect.