# CS 305 Module Five Coding Assignment Checksum Verification Document

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## Algorithm Cipher

For this task, SHA-256 (Secure Hash Algorithm 256-bit) is a highly recommended cryptographic hash function. It’s widely accepted as secure against collision attacks and is included in the Java Security Standard Algorithm Names and It is one of the most secure cryptographic hash functions available, which avoids collisions effectively..

## Justification

SHA-256 is part of the SHA-2 family of cryptographic hash functions and is widely used for data integrity and verification purposes. It produces a 256-bit hash value, which ensures that even the smallest change in the input data will produce a significantly different hash. This characteristic makes SHA-256 highly resistant to collisions, where two different inputs generate the same hash output. Unlike older algorithms such as MD5 or SHA-1, which have been found vulnerable to collision attacks, SHA-256 is considered secure for modern encryption needs, including key verification and secure file transmission.

## 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.

