# CS 305 Module Five Checksum Verification Assignment

**Instructions:** Replace the bracketed text with your answers in your own words.

## Algorithm Cipher

Recommend an appropriate encryption algorithm cipher that avoids collisions.

SHA-256

## Justification

Justify your reasoning for the recommended algorithm cipher by providing a brief, high-level overview of the encryption algorithm cipher.

SHA-256 is a hashing algorithm that has yet to be broken. Used heavily by the government.

## Generate Checksum

Refactor the code to encrypt a text string and generate a checksum verification. You will submit your refactored code for your instructor to review in addition to this document. It starts by turning the string into binary then sets some hash values. From there is runs a large loop to manipulate the data and then finally compresses and combines the values.

## Verification

Demonstrate that a hash value has been created for the unique text string (your first and last name) by executing the Java code. Then use your web browser to connect to the RESTful API server. This should show your first and last name as the unique data string in the browser, the name of the algorithm cipher you used, and the checksum hash value. Capture a screenshot of the web browser with your unique information and insert it below.

Graphical user interface, text, application, email, website

Description automatically generated