Cryptographic Hash Function Implementation

Problem:

In this coding challenge, you are tasked with implementing a cryptographic hash function, specifically the SHA-256 (Secure Hash Algorithm 256-bit) algorithm. Cryptographic hash functions are fundamental in modern cryptography and are used for various purposes such as data integrity verification and digital signatures.

You will be provided with a message (input data) as a string. Your goal is to implement the SHA-256 algorithm to compute the hash value (digest) of the input message.

Implement the following function in C:

```C/C++
#include <stdio.h>
#include <stdint.h>

void sha256(const char *message, uint32_t hash[8]);

int main() {
  // Your implementation here
  return 0;
}

void sha256(const char *message, uint32_t hash[8]) {
  // SHA-256 algorithm implementation
}
```

Input:

- A message (input data) is represented as a string.

Output:

- The hash value (digest) of the input message.

Constraints:

- The input message is a string of arbitrary length.
- The output hash value is a 256-bit digest represented as an array of 8 32-bit integers (hash[8]).

Example:

```
C/C++
// input

Message: "Pinneaple should never be on pizza!"

// output

SHA-256 Hash:
"c0f1dc6fb27980543e1fd980040cd7539f4028666483a8eb641eef3c4ce6c0e2"
```