

```

public static byte[] ComputeHashSHA512(byte[] toBeHashed)
{
    using (var sha512 = SHA512.Create())
    {
        return sha512.ComputeHash(toBeHashed);
    }
}

```

Code Listing 5

Like the MD5 class, you call **Create** on the **SHA1**, **SHA256**, and **SHA512** objects. Next, you call **ComputeHash**, which returns the hash as a byte array. The following screenshot shows the results of the different SHA variants (SHA-1, SHA-256, and SHA-512) being run against two different messages.

```

file:///C:/Projects/Synfusion/CryptographInDotNet/Hash/bin/Debug/SecureHa...
Secure Hash Demonstration in .NET

Original Message 1 : Original Message to hash
Original Message 2 : This is another message to hash

SHA 1 Hashes
Message 1 hash = 0IKZS/zSk7YHDXip2waQ470YNk8=
Message 2 hash = Fi0t9/D+u/LiQkPJ9PcaYSnlEJA=

SHA 256 Hashes
Message 1 hash = 3B0zM19QLRjQLyG3+KpyHvSFqSxOD2qNNDcAJexfB44=
Message 2 hash = 1YJHaZ3oWgXF70zyQPQnlf8exCgbcQa1CQU6HEHffM=

SHA 512 Hashes
Message 1 hash = S8fIksRb1BU8WNB/QLUswjJUBaUgx+swRytDoUcX4yMHvxt6LK0IRGqe8id1JUq
XY/rKhjLPoDXSweMTGiUJhg==
Message 2 hash = ICN3h3lK+f6IGEBP1tZo6sZkb8eXXI8TZ9HXw04FdoqgWEwI9KYlfq9lWU4f2fk
HoCTWIbWFWXnP09T8/li4tw==

```

Figure 4: SHA-1, SHA-256, and SHA-512 example

The code for generating the hashes in the preceding example is as follows.

```

class Program
{
    static void Main(string[] args)
    {
        var originalMessage = "Original Message to hash";
        var originalMessage2 = "This is another message to hash";

        Console.WriteLine("Secure Hash Demonstration in .NET");
    }
}

```