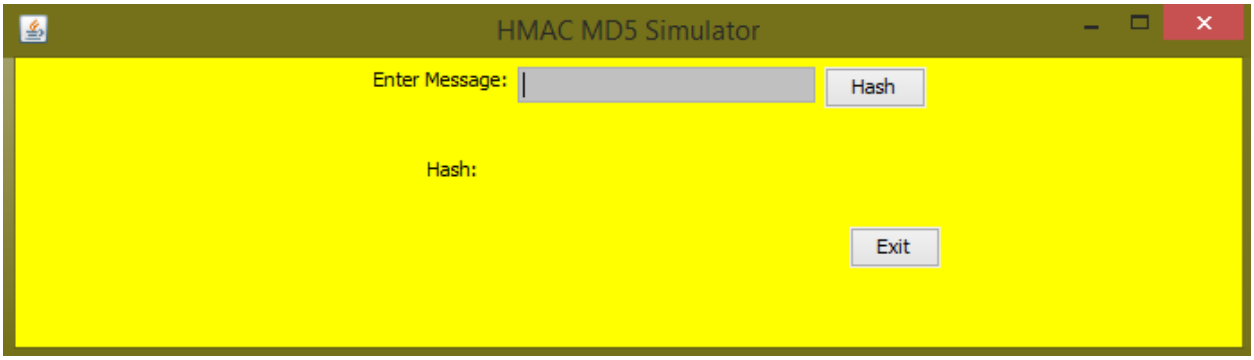
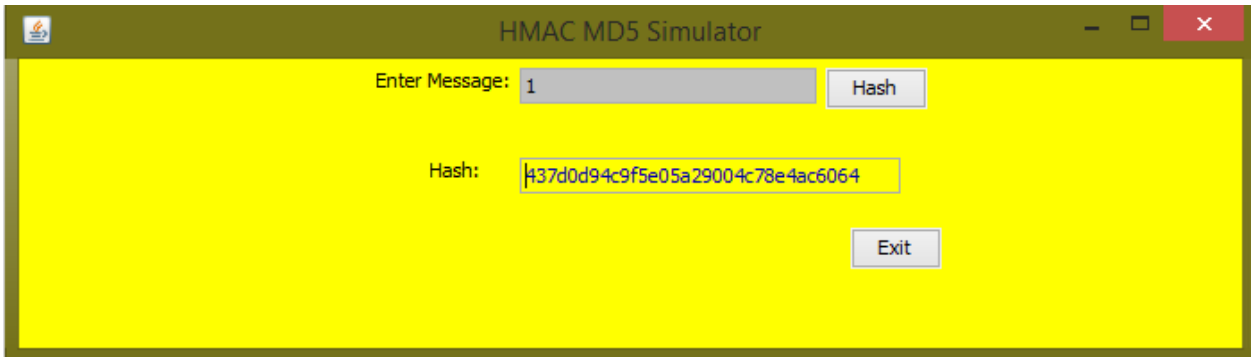
The Simulator UI



Input can be any character.

Once the **Hash button** is pressed, the hashed message will appear.

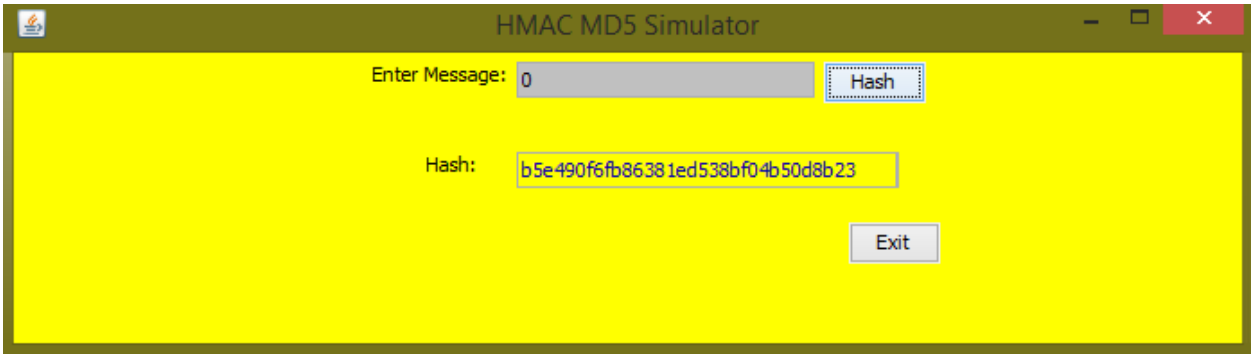
Output is 32 characters and it will be produced under input box.



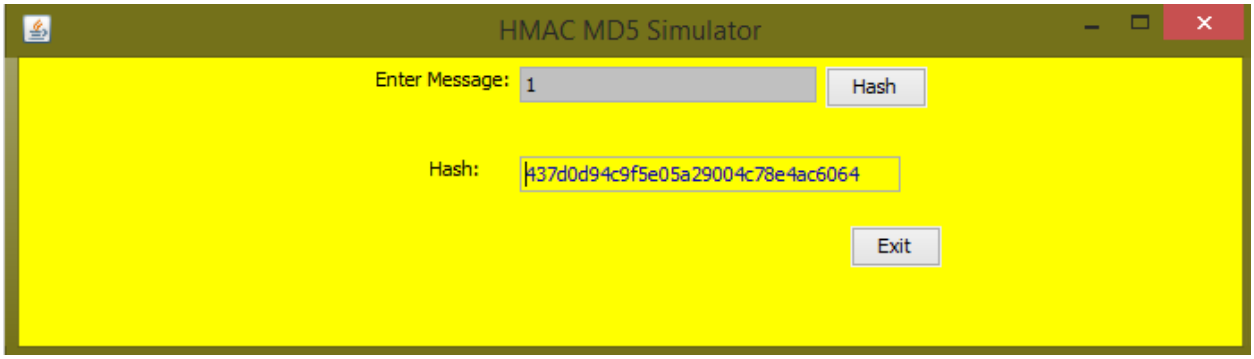
The **Exit button** will terminate the program.

Observing the **Avalanche effect** on the HMAC input 0, 1 and 2:

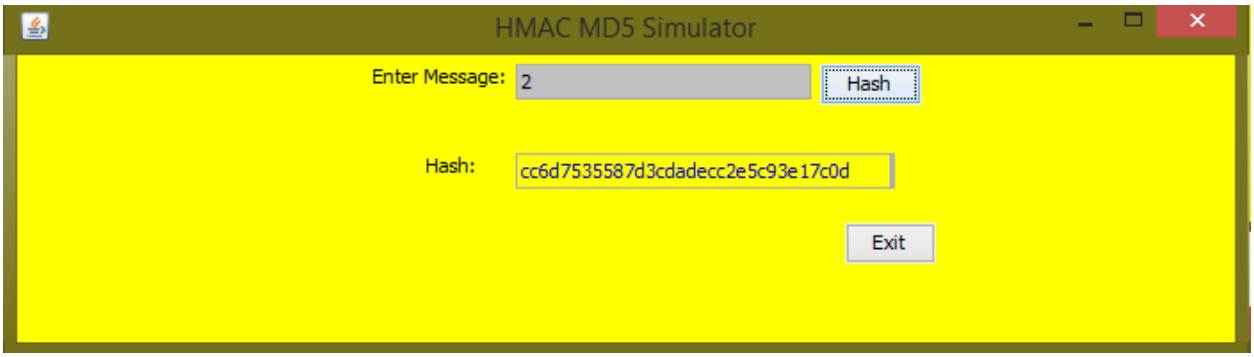
With input 0; 0000 (binary):



With input 1; 0001 (binary):



With input 2; 0010 (binary):



These results conclude that this algorithm demonstrates one of the desirable properties of cryptographic algorithms, the avalanche effect, by producing significant changes in the output while changing each input only slightly. Each output for the inputs provided is producing completely different (each character in the output is different for each input). Therefore, this function has strong randomization, making it near impossible determining the input from the output.

Reference: https://en.wikipedia.org/wiki/Avalanche_effect