

代码

```
1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <string.h>
4  #include <gmssl/sm3.h>
5
6  int main() {
7      FILE *file = NULL;
8      unsigned char buffer[1024];
9      size_t bytesRead;
10     SM3_CTX ctx;
11     unsigned char hash[SM3_DIGEST_SIZE];
12
13     // 打开文件
14     file = fopen("sn.txt", "rb");
15     if (!file) {
16         perror("Error opening file");
17         return EXIT_FAILURE;
18     }
19
20     // 初始化SM3上下文
21     sm3_init(&ctx);
22
23     // 读取文件并更新哈希状态
24     while ((bytesRead = fread(buffer, 1, sizeof(buffer), file)) > 0) {
25         sm3_update(&ctx, buffer, bytesRead);
26     }
27
28     // 最终化哈希并输出结果
29     sm3_finish(&ctx, hash);
30     for (int i = 0; i < SM3_DIGEST_SIZE; i++) {
31         printf("%02x", hash[i]);
32     }
33     printf("\n");
34
35     // 清理工作
36     fclose(file);
37
38     return EXIT_SUCCESS;
39 }
```

结果

```
1 [root@localhost roc-exp]# make
2 gcc -I ~/GmSSL-3.1.1-Linux/include sm3.c -L ~/GmSSL-3.1.1-Linux/lib -
  lgmssl -o gsm3
3 [root@localhost roc-exp]# ./gsm3
4 2476052a1213e11aa81f31920528336963fb2bd5d8f247bc4c40c7112e24ae4f
5 [root@localhost roc-exp]# cat sn.txt | openssl sm3
6 SM3(stdin)=
  2476052a1213e11aa81f31920528336963fb2bd5d8f247bc4c40c7112e24ae4f
```

结果一致