

```
#objdump -d libUtil.a
```

Without template parameter, and use branch;

md5sum libUtil.a: **a096c7c58574b651fbfb3fdd54f8225a**

Disassembly of section

.text._ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi:

0000000000000000

<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi>:

```
0: 48 63 c2      movslq %edx,%rax
3: 41 54         push  %r12
5: 55           push  %rbp
6: 4c 8d 64 06 f0 lea   -0x10(%rsi,%rax,1),%r12
b: 53           push  %rbx
c: 48 89 fd      mov   %rdi,%rbp
f: 8d 5a f0      lea   -0x10(%rdx),%ebx
12: eb 0b        jmp   1f
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x1f>
14: 0f 1f 40 00   nopl  0x0(%rax)
18: 83 eb 10      sub   $0x10,%ebx
1b: 49 83 ec 10   sub   $0x10,%r12
1f: 48 89 ef      mov   %rbp,%rdi
22: 4c 89 e6      mov   %r12,%rsi
25: 48 83 c5 10   add   $0x10,%rbp
29: e8 00 00 00 00 callq 2e
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x2e>
2e: 83 fb 0f      cmp   $0xf,%ebx
31: 7f e5        jg    18
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x18>
33: 48 63 c3      movslq %ebx,%rax
36: 4c 89 e6      mov   %r12,%rsi
39: 89 da        mov   %ebx,%edx
3b: 48 89 ef      mov   %rbp,%rdi
3e: 48 29 c6      sub   %rax,%rsi
41: 5b          pop   %rbx
42: 5d          pop   %rbp
43: 41 5c        pop   %r12
45: e9 00 00 00 00 jmpq   4a
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x4a>
```

Disassembly of section

.text._ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi:

0000000000000000

<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi>:

```
0: 48 63 c2      movslq %edx,%rax
3: 41 54         push  %r12
5: 55           push  %rbp
6: 4c 8d 64 06 e0 lea   -0x20(%rsi,%rax,1),%r12
```

```

b: 53          push  %rbx
c: 48 89 fd     mov   %rdi,%rbp
f: 8d 5a e0     lea   -0x20(%rdx),%ebx
12: eb 0b       jmp    1f
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x1f>
14: 0f 1f 40 00   nopl  0x0(%rax)
18: 83 eb 20      sub   $0x20,%ebx
1b: 49 83 ec 20    sub   $0x20,%r12
1f: 48 89 ef      mov   %rbp,%rdi
22: 4c 89 e6      mov   %r12,%rsi
25: 48 83 c5 20    add   $0x20,%rbp
29: e8 00 00 00 00 callq 2e
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x2e>
2e: 83 fb 1f      cmp   $0x1f,%ebx
31: 7f e5        jg     18
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x18>
33: 83 fb 0f      cmp   $0xf,%ebx
36: 7e 16        jle    4e
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x4e>
38: 49 83 ec 10    sub   $0x10,%r12
3c: 48 89 ef      mov   %rbp,%rdi
3f: 83 eb 10      sub   $0x10,%ebx
42: 4c 89 e6      mov   %r12,%rsi
45: 48 83 c5 10    add   $0x10,%rbp
49: e8 00 00 00 00 callq 4e
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x4e>
4e: 48 63 c3      movslq %ebx,%rax
51: 4c 89 e6      mov   %r12,%rsi
54: 89 da        mov   %ebx,%edx
56: 48 89 ef      mov   %rbp,%rdi
59: 48 29 c6      sub   %rax,%rsi
5c: 5b          pop   %rbx
5d: 5d          pop   %rbp
5e: 41 5c        pop   %r12
60: e9 00 00 00 00 jmpq   65
<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x65>

```

With template parameter, and use no branch:

md5sum libUtil.a: **a096c7c58574b651fbfb3fdd54f8225a**

Disassembly of section

.text._ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi>:

0000000000000000

<_ZN6impala12SimdByteSwap12ByteSwapSimdLLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi>:

```

0: 48 63 c2      movslq %edx,%rax
3: 41 54        push  %r12
5: 55          push  %rbp

```

```

6: 4c 8d 64 06 f0    lea    -0x10(%rsi,%rax,1),%r12
b: 53                push   %rbx
c: 48 89 fd          mov    %rdi,%rbp
f: 8d 5a f0          lea    -0x10(%rdx),%ebx
12: eb 0b            jmp    1f
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x1f>
14: 0f 1f 40 00        nopl   0x0(%rax)
18: 83 eb 10           sub    $0x10,%ebx
1b: 49 83 ec 10        sub    $0x10,%r12
1f: 48 89 ef          mov    %rbp,%rdi
22: 4c 89 e6          mov    %r12,%rsi
25: 48 83 c5 10        add    $0x10,%rbp
29: e8 00 00 00 00     callq 2e
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x2e>
2e: 83 fb 0f          cmp    $0xf,%ebx
31: 7f e5             jg     18
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x18>
33: 48 63 c3          movslq %ebx,%rax
36: 4c 89 e6          mov    %r12,%rsi
39: 89 da            mov    %ebx,%edx
3b: 48 89 ef          mov    %rbp,%rdi
3e: 48 29 c6          sub    %rax,%rsi
41: 5b              pop    %rbx
42: 5d              pop    %rbp
43: 41 5c            pop    %r12
45: e9 00 00 00 00     jmpq   4a
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi16EXadL_ZNS0_11ByteSwap128EPhPKhEEEEvPvPKvi+0x4a>

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Disassembly of section

.text._ZN6impala12SimdByteSwap12ByteSwapSimdILLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi:

0000000000000000

```

<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi>:
0: 48 63 c2          movslq %edx,%rax
3: 41 54            push   %r12
5: 55              push   %rbp
6: 4c 8d 64 06 e0     lea    -0x20(%rsi,%rax,1),%r12
b: 53              push   %rbx
c: 48 89 fd          mov    %rdi,%rbp
f: 8d 5a e0          lea    -0x20(%rdx),%ebx
12: eb 0b            jmp    1f
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x1f>
14: 0f 1f 40 00        nopl   0x0(%rax)
18: 83 eb 20           sub    $0x20,%ebx
1b: 49 83 ec 20        sub    $0x20,%r12
1f: 48 89 ef          mov    %rbp,%rdi
22: 4c 89 e6          mov    %r12,%rsi
25: 48 83 c5 20        add    $0x20,%rbp
29: e8 00 00 00 00     callq 2e
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x2e>

```

```

2e: 83 fb 1f      cmp  $0x1f,%ebx
31: 7f e5          jg   18
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x18>
33: 83 fb 0f      cmp  $0xf,%ebx
36: 7e 16          jle  4e
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x4e>
38: 49 83 ec 10    sub  $0x10,%r12
3c: 48 89 ef      mov  %rbp,%rdi
3f: 83 eb 10      sub  $0x10,%ebx
42: 4c 89 e6      mov  %r12,%rsi
45: 48 83 c5 10    add  $0x10,%rbp
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5c: 5b           pop  %rbx
5d: 5d           pop  %rbp
5e: 41 5c        pop  %r12
60: e9 00 00 00 00 jmpq 65
<_ZN6impala12SimdByteSwap12ByteSwapSimdILLi32EXadL_ZNS0_11ByteSwap256EPhPKhEEEEvPvPKvi+0x65>

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