```
        .file   "bsort100.c"
        .comm   Array,40004,32
        .comm   Seed,4,4
        .comm   factor,4,4
        .text
.globl main
        .type   main, @function
main:
.LFB0:
        .cfi_startproc
3   pushq   %rbp
        .cfi_def_cfa_offset 16
1   movq    %rsp, %rbp
        .cfi_offset 6, -16
        .cfi_def_cfa_register 6
3   movl    $Array, %edi
1   movl    $0, %eax
3   call    Initialize
3   movl    $Array, %edi
1   movl    $0, %eax
3   call    BubbleSort
3   leave
5   ret
        .cfi_endproc
.LFE0:
        .size   main, .-main
.globl Initialize
        .type   Initialize, @function
Initialize:
.LFB1:
        .cfi_startproc
3   pushq   %rbp
        .cfi_def_cfa_offset 16
1   movq    %rsp, %rbp
        .cfi_offset 6, -16
        .cfi_def_cfa_register 6
3   movq    %rdi, -24(%rbp)
1   movl    $-1, factor(%rip)
3   movl    factor(%rip), %eax
3   movl    %eax, -4(%rbp)
1   movl    $1, -8(%rbp)
4   jmp .L4
.L5:
1   movl    -8(%rbp), %eax
??? cltq
3   salq    $2, %rax
4   addq    -24(%rbp), %rax
1   movl    -8(%rbp), %edx
1   imull   -4(%rbp), %edx
1   addl    %edx, %edx
1   movl    %edx, (%rax)
1   addl    $1, -8(%rbp)
.L4:
4   cmpl    $10000, -8(%rbp)
1   jle .L5
3   leave
5   ret
        .cfi_endproc
.LFE1:
        .size   Initialize, .-Initialize
```

```
        .globl BubbleSort
            .type    BubbleSort, @function
        BubbleSort:
        .LFB2:
            .cfi_startproc
3       pushq    %rbp
            .cfi_def_cfa_offset 16
1       movq     %rsp, %rbp
            .cfi_offset 6, -16
            .cfi_def_cfa_register 6
3       movq     %rdi, -40(%rbp)
1       movl     $0, -20(%rbp)
1       movl     $1, -4(%rbp)
4       jmp .L8
        .L16:
1       movl     $1, -20(%rbp)
1       movl     $1, -8(%rbp)
4       jmp .L9
        .L13:
1       movl     $10000, %eax
1       subl     -4(%rbp), %eax
4       cmpl     -8(%rbp), %eax
1       jl   .L19
        .L10:
1       movl     -8(%rbp), %eax
???     cltq
3       salq     $2, %rax
4       addq     -40(%rbp), %rax
1       movl     (%rax), %edx
1       movl     -8(%rbp), %eax
???     cltq
1       addq     $1, %rax
3       salq     $2, %rax
1       addq     -40(%rbp), %rax
1       movl     (%rax), %eax
4       cmpl     %eax, %edx
1       jle .L12
1       movl     -8(%rbp), %eax
???     cltq
3       salq     $2, %rax
1       addq     -40(%rbp), %rax
1       movl     (%rax), %eax
1       movl     %eax, -16(%rbp)
1       movl     -8(%rbp), %eax
???     cltq
3       salq     $2, %rax
1       addq     -40(%rbp), %rax
1       movl     -8(%rbp), %edx
3       movslq   %edx,%rdx
1       addq     $1, %rdx
3       salq     $2, %rdx
1       addq     -40(%rbp), %rdx
1       movl     (%rdx), %edx
1       movl     %edx, (%rax)
1       movl     -8(%rbp), %eax
???     cltq
1       addq     $1, %rax
3       salq     $2, %rax
1       addq     -40(%rbp), %rax
1       movl     -16(%rbp), %edx
```

```
1    movl    %edx, (%rax)
1    movl    $0, -20(%rbp)
.L12:
1    addl    $1, -8(%rbp)
.L9:
4    cmpl    $9999, -8(%rbp)
1    jle .L13
4    jmp .L11
.L19:
0    nop
.L11:
4    cmpl    $0, -20(%rbp)
1    jne .L20
.L14:
1    addl    $1, -4(%rbp)
.L8:
4    cmpl    $9999, -4(%rbp)
1    jle .L16
4    jmp .L18
.L20:
0    nop
.L18:
3    leave
5    ret
     .cfi_endproc
.LFE2:
     .size   BubbleSort, .-BubbleSort
     .ident  "GCC: (Debian 4.4.5-8) 4.4.5"
     .section    .note.GNU-stack,"",@progbits
```