```
            .file "sort.c"
            .text
            .globl sort
            .type sort, @function
sort:
            pushl %ebp          # push ebp onto the stack
            movl %esp, %ebp     # set ebp to stack top
                                #    a: 8(%ebp), n: 12(%ebp)
            subl $16, %esp      # alocate stack space
                                #    i: -4(%ebp)
                                #    j: -8(%ebp)
                                # temp: -12(%ebp)
            movl $0, -4(%ebp)   # i = 0;
            jmp .L2             # goto L2;
.L6:
            movl 12(%ebp), %eax # eax = n;
            subl $1, %eax       # eax--;
            movl %eax, -8(%ebp) # j = n - 1;
            jmp .L3             # goto L3;
.L5:
            movl -4(%ebp), %eax # eax = i;
            sall $2, %eax       # eax = i * 4;
            addl 8(%ebp), %eax  # eax = &a[i];
            movl (%eax), %edx   # edx = a[i];
            movl -8(%ebp), %eax # eax = j;
            sall $2, %eax       # eax = j * 4;
            addl 8(%ebp), %eax  # eax = &a[j];
            movl (%eax), %eax   # eax = a[j];
            cmpl %eax, %edx     # if (a[i] <= a[j])
            jle .L4             #     goto L4;
            movl -4(%ebp), %eax # eax = i;
            sall $2, %eax       # eax = i * 4;
            addl 8(%ebp), %eax  # eax= &a[i];
            movl (%eax), %eax   # eax = a[i];
            movl %eax, -12(%ebp) # temp = a[i];
            movl -4(%ebp), %eax # eax = i;
            sall $2, %eax       # eax = i * 4
            movl %eax, %edx     # edx = i * 4;
            addl 8(%ebp), %edx  # edx = &a[i];
            movl -8(%ebp), %eax # eax = j;
            sall $2, %eax       # eax = j * 4;
            addl 8(%ebp), %eax  # eax = &a[j];
            movl (%eax), %eax   # eax = a[j];
            movl %eax, (%edx)   # a[i] = a[j];
            movl -8(%ebp), %eax # eax = j
            sall $2, %eax       # eax = j * 4;
            movl %eax, %edx     # eax = j * 4;
            addl 8(%ebp), %edx  # edx = &a[j];
            movl -12(%ebp), %eax # eax = temp
            movl %eax, (%edx)   # a[j] = temp;
.L4:
            subl $1, -8(%ebp)   # j--;
.L3:
            movl -8(%ebp), %eax # eax = j;
            cmpl -4(%ebp), %eax # if (j > i)
            jg .L5              #     goto L5;
            addl $1, -4(%ebp)   # i++;
.L2:
            movl -4(%ebp), %eax # eax = i;
```

```
cmpl 12(%ebp), %eax   # if (i < n)
jl .L6                #     goto L6;
leave
ret                   # return;
```