Saving registers				
	sort:	addi	$sp,$sp, -20	# make room on stack for 5 registers
		sw	$ra, 16($sp)	# save $ra on stack
		sw	$s3,12($sp)	# save $s3 on stack
		sw	$s2, 8($sp)	# save $s2 on stack
		sw	$s1, 4($sp)	# save $s1 on stack
		sw	$s0, 0($sp)	# save $s0 on stack
Procedure body				
Move parameters		move	$s2, $a0	# copy parameter $a0 into $s2 (save $a0)
		move	$s3, $a1	# copy parameter $a1 into $s3 (save $a1)
Outer loop		move	$s0, $zero	# i = 0
	for1tst:	slt	$t0, $s0,$s3	# reg$t0=0if$s0Š$s3(iŠn)
		beq	$t0, $zero, exit1	# go to exit1 if $s0 Š $s3 (i Š n)
Inner loop		addi	$s1, $s0, -1	# j = i - 1
	for2tst:	slti	$t0, $s1,0	# reg$t0=1if$s1<0(j<0)
		bne	$t0, $zero, exit2	# go to exit2 if $s1 < 0 (j < 0)
		sll	$t1, $s1, 2	# reg $t1 = j * 4
		add	$t2, $s2, $t1	# reg $t2 = v + (j * 4)
		lw	$t3, 0($t2)	# reg $t3 = v[j]
		lw	$t4, 4($t2)	# reg $t4 = v[j + 1]
		slt	$t0, $t4, $t3	# reg $t0 = 0 if $t4 Š $t3
		beq	$t0, $zero, exit2	# go to exit2 if $t4 Š $t3
Pass parameters and call		move	$a0, $s2	# 1st parameter of swap is v (old $a0)
		move	$a1, $s1	# 2nd parameter of swap is j
		jal	swap	# swap code shown in Figure 2.25
Inner loop		addi	$s1, $s1, -1	# j -= 1
		j	for2tst	# jump to test of inner loop
Outer loop	exit2:	addi	$s0, $s0, 1	# i += 1
		j	for1tst	# jump to test of outer loop
Restoring registers				
	exit1:	lw	$s0, 0($sp)	# restore $s0 from stack
		lw	$s1, 4($sp)	# restore $s1 from stack
		lw	$s2, 8($sp)	# restore $s2 from stack
		lw	$s3,12($sp)	# restore $s3 from stack
		lw	$ra,16($sp)	# restore $ra from stack
		addi	$sp,$sp, 20	# restore stack pointer
Procedure return				
		jr	$ra	# return to calling routine

FIGURE 2.27 MIPS assembly version of procedure sort **in Figure 2.26.**

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