Given the following function header:

```c
int mystery2(int *a, int k, int n)
```

write C code for the body of the function that is equivalent to the following assembly code.

```assembly
mystery2:
pushl %ebp
movl %esp, %ebp
pushl %edi
pushl %esi
pushl %ebx
xorl %eax, %eax
xorl %ecx, %ecx
movl 8(%ebp), %edi
movl 12(%ebp), %esi
movl 16(%ebp), %ebx
cmpl %ebx, %eax
jge .L9
.L7:
movl (%edi,%ecx,4), %edx
cmpl %esi, %edx
jge .L4
addl %edx, %eax
.L4:
incl %ecx
cmpl %ebx, %ecx
jl .L9
.popl %ebx
.popl %esi
.popl %edi
.popl %ebp
ret
```

Hints: the first parameter is stored at $8(%ebp)$, the second is stored at $12(%ebp)$, and the third is stored at $16(%ebp)$. The function’s return value is left in register $%eax$ at the end of the function.