```
    .file   "matmult.c"
    .comm   Seed,4,4
    .comm   ArrayA,400,32
    .comm   ArrayB,400,32
    .comm   ResultArray,400,32
    .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   call    InitSeed
3   movl    $ResultArray, %edx
3   movl    $ArrayB, %esi
3   movl    $ArrayA, %edi
3   call    Test
3   leave
5   ret
    .cfi_endproc
.LFE0:
    .size   main, .-main
.globl InitSeed
    .type   InitSeed, @function
InitSeed:
.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   movl    $0, Seed(%rip)
3   leave
5   ret
    .cfi_endproc
.LFE1:
    .size   InitSeed, .-InitSeed
.globl Test
    .type   Test, @function
Test:
.LFB2:
    .cfi_startproc
3   pushq   %rbp
    .cfi_def_cfa_offset 16
1   movq    %rsp, %rbp
    .cfi_offset 6, -16
    .cfi_def_cfa_register 6
1   subq    $32, %rsp
3   movq    %rdi, -8(%rbp)
3   movq    %rsi, -16(%rbp)
3   movq    %rdx, -24(%rbp)
1   movq    -8(%rbp), %rax
3   movq    %rax, %rdi
3   call    Initialize
1   movq    -16(%rbp), %rax
```

```
3   movq    %rax, %rdi
3   call    Initialize
1   movq    -24(%rbp), %rdx
1   movq    -16(%rbp), %rcx
1   movq    -8(%rbp), %rax
3   movq    %rcx, %rsi
3   movq    %rax, %rdi
3   call    Multiply
3   leave
5   ret
    .cfi_endproc
.LFE2:
    .size   Test, .-Test
.globl Initialize
    .type   Initialize, @function
Initialize:
.LFB3:
    .cfi_startproc
3   pushq   %rbp
    .cfi_def_cfa_offset 16
3   movq    %rsp, %rbp
    .cfi_offset 6, -16
    .cfi_def_cfa_register 6
3   pushq   %r12
3   pushq   %rbx
1   subq    $32, %rsp
1   movq    %rdi, -40(%rbp)
1   movl    $0, -24(%rbp)
4   jmp .L8
    .cfi_offset 3, -32
    .cfi_offset 12, -24
.L11:
3   movl    $0, -20(%rbp)
4   jmp .L9
.L10:
1   movl    -24(%rbp), %eax
3   movslq  %eax,%rdx
3   movq    %rdx, %rax
4   salq    $2, %rax
4   addq    %rdx, %rax
4   salq    $3, %rax
3   movq    %rax, %rbx
4   addq    -40(%rbp), %rbx
1   movl    -20(%rbp), %r12d
3   call    RandomInteger
3   movslq  %r12d,%rdx
1   movl    %eax, (%rbx,%rdx,4)
1   addl    $1, -20(%rbp)
.L9:
4   cmpl    $9, -20(%rbp)
1   jle .L10
1   addl    $1, -24(%rbp)
.L8:
4   cmpl    $9, -24(%rbp)
1   jle .L11
1   addq    $32, %rsp
4   popq    %rbx
4   popq    %r12
3   leave
5   ret
```

```
    .cfi_endproc
.LFE3:
    .size   Initialize, .-Initialize
.globl RandomInteger
    .type   RandomInteger, @function
RandomInteger:
.LFB4:
    .cfi_startproc
3   pushq   %rbp
    .cfi_def_cfa_offset 16
3   movq    %rsp, %rbp
    .cfi_offset 6, -16
    .cfi_def_cfa_register 6
3   pushq   %rbx
3   movl    Seed(%rip), %eax
1   imull   $133, %eax, %eax
2   leal    81(%rax), %ecx
3   movl    $271652039, %edx
1   movl    %ecx, %eax
1   imull   %edx
4   sarl    $9, %edx
1   movl    %ecx, %eax
4   sarl    $31, %eax
1   movl    %edx, %ebx
    .cfi_offset 3, -24
1   subl    %eax, %ebx
1   movl    %ebx, %eax
1   imull   $8095, %eax, %eax
1   movl    %ecx, %edx
1   subl    %eax, %edx
1   movl    %edx, %eax
1   movl    %eax, Seed(%rip)
3   movl    Seed(%rip), %eax
3   popq    %rbx
3   leave
5   ret
    .cfi_endproc
.LFE4:
    .size   RandomInteger, .-RandomInteger
.globl Multiply
    .type   Multiply, @function
Multiply:
.LFB5:
    .cfi_startproc
3   pushq   %rbp
    .cfi_def_cfa_offset 16
1   movq    %rsp, %rbp
    .cfi_offset 6, -16
    .cfi_def_cfa_register 6
3   pushq   %r13
3   pushq   %r12
3   pushq   %rbx
1   movq    %rdi, -32(%rbp)
1   movq    %rsi, -40(%rbp)
1   movq    %rdx, -48(%rbp)
3   movl    $0, %ebx
    .cfi_offset 3, -40
    .cfi_offset 12, -32
    .cfi_offset 13, -24
4   jmp .L16
```

```
.L21:
3   movl    $0, %r12d
4   jmp .L17
.L20:
1   movslq  %ebx,%rdx
1   movq    %rdx, %rax
4   salq    $2, %rax
4   addq    %rdx, %rax
4   salq    $3, %rax
1   addq    -48(%rbp), %rax
1   movl    %r12d, %edx
3   movslq  %edx,%rdx
3   movl    $0, (%rax,%rdx,4)
3   movl    $0, %r13d
4   jmp .L18
.L19:
1   movslq  %ebx,%rdx
1   movq    %rdx, %rax
4   salq    $2, %rax
4   addq    %rdx, %rax
4   salq    $3, %rax
1   movq    %rax, %rcx
1   addq    -48(%rbp), %rcx
1   movl    %r12d, %esi
1   movslq  %ebx,%rdx
1   movq    %rdx, %rax
4   salq    $2, %rax
4   addq    %rdx, %rax
4   salq    $3, %rax
1   addq    -48(%rbp), %rax
1   movl    %r12d, %edx
1   movslq  %edx,%rdx
1   movl    (%rax,%rdx,4), %edi
1   movslq  %ebx,%rdx
1   movq    %rdx, %rax
4   salq    $2, %rax
1   addq    %rdx, %rax
4   salq    $3, %rax
1   addq    -32(%rbp), %rax
1   movl    %r13d, %edx
1   movslq  %edx,%rdx
1   movl    (%rax,%rdx,4), %r8d
1   movslq  %r13d,%rdx
1   movq    %rdx, %rax
4   salq    $2, %rax
1   addq    %rdx, %rax
4   salq    $3, %rax
1   addq    -40(%rbp), %rax
1   movl    %r12d, %edx
1   movslq  %edx,%rdx
1   movl    (%rax,%rdx,4), %eax
1   imull   %r8d, %eax
2   leal    (%rdi,%rax), %edx
1   movslq  %esi,%rax
1   movl    %edx, (%rcx,%rax,4)
1   addl    $1, %r13d
.L18:
4   cmpl    $9, %r13d
1   jle .L19
1   addl    $1, %r12d
```

```
.L17:
4   cmpl    $9, %r12d
1   jle .L20
1   addl    $1, %ebx
.L16:
4   cmpl    $9, %ebx
1   jle .L21
4   popq    %rbx
4   popq    %r12
4   popq    %r13
3   leave
5   ret
    .cfi_endproc
.LFE5:
    .size   Multiply, .-Multiply
    .ident  "GCC: (Debian 4.4.5-8) 4.4.5"
    .section    .note.GNU-stack,"",@progbits
```