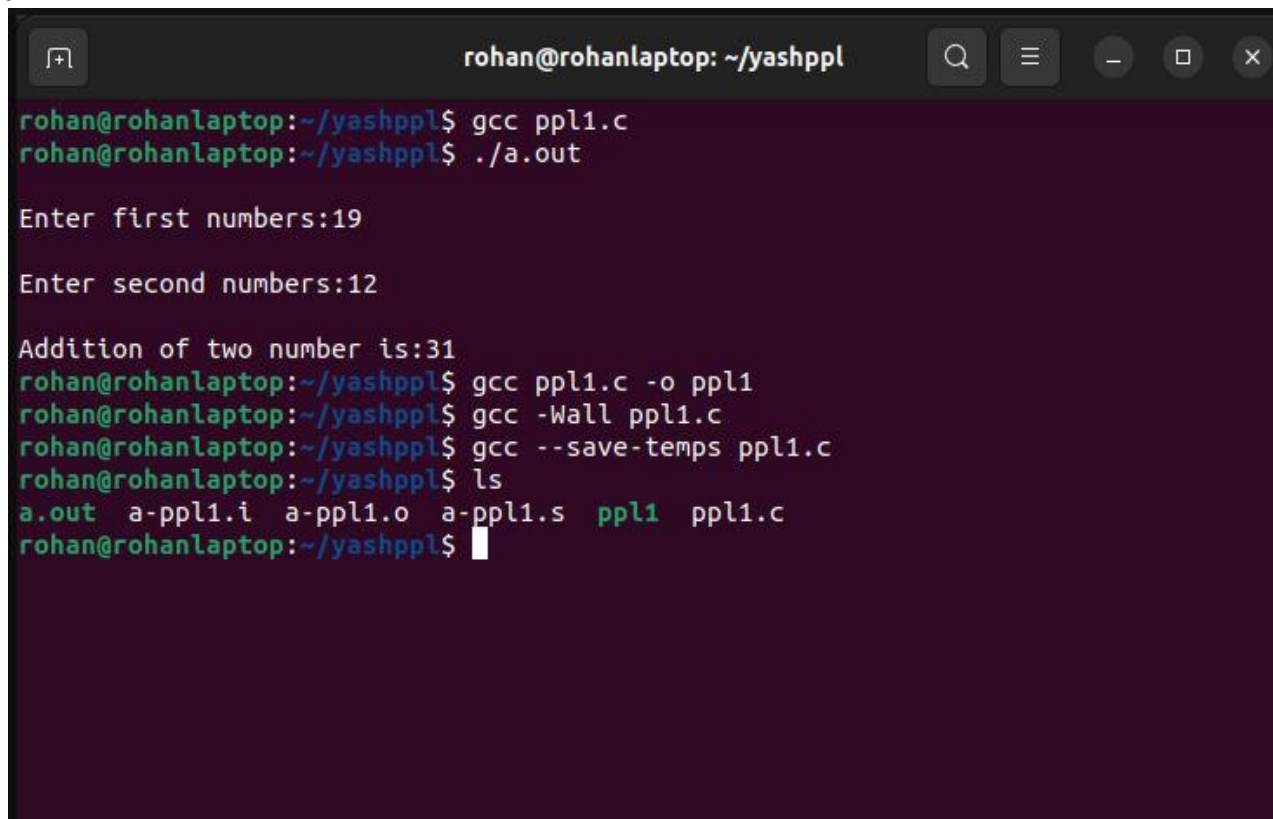# Assignment No:01

Program:

```c
#include<stdio.h>
void sum(int a, int b){
int sum; sum = a + b;
        printf("\nAddition of two number is:%d\n",sum);
}; int main(){
int a, b;
        printf("\nEnter first numbers:");
        scanf("%d", &a); printf("\nEnter
        second numbers:"); scanf("%d",
        &b); sum(a, b); return 0;
}
```
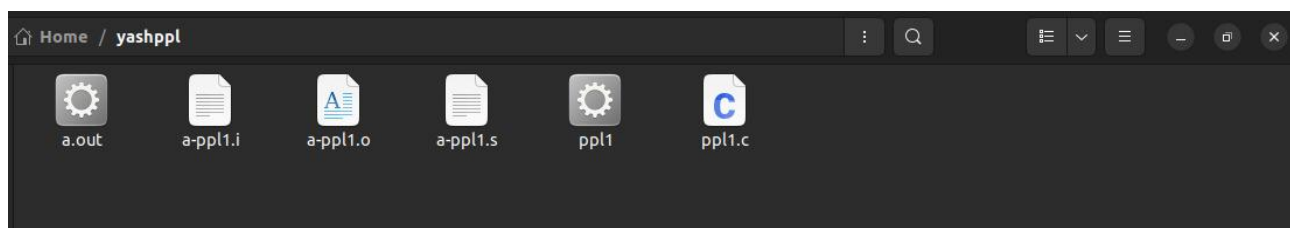
642303003

file.i:

```
# 0 "ppl1.c"
# 0 "<built-in>"
# 0 "<command-line>"
# 1 "/usr/include/stdc-predef.h" 1 3 4
# 0 "<command-line>" 2
# 1 "ppl1.c"
# 1 "/usr/include/stdio.h" 1 3 4
# 27 "/usr/include/stdio.h" 3 4
# 1 "/usr/include/x86_64-linux-gnu/bits/libc-header-start.h" 1 3 4
# 33 "/usr/include/x86_64-linux-gnu/bits/libc-header-start.h" 3 4
# 1 "/usr/include/features.h" 1 3 4
# 393 "/usr/include/features.h" 3 4
# 1 "/usr/include/features-time64.h" 1 3 4
# 20 "/usr/include/features-time64.h" 3 4
# 1 "/usr/include/x86_64-linux-gnu/bits/wordsize.h" 1 3 4
# 21 "/usr/include/features-time64.h" 2 3 4
# 1 "/usr/include/x86_64-linux-gnu/bits/timesize.h" 1 3 4
# 19 "/usr/include/x86_64-linux-gnu/bits/timesize.h" 3 4
# 1 "/usr/include/x86_64-linux-gnu/bits/wordsize.h" 1 3 4
# 20 "/usr/include/x86_64-linux-gnu/bits/timesize.h" 2 3 4
# 22 "/usr/include/features-time64.h" 2 3 4
# 394 "/usr/include/features.h" 2 3 4
# 487 "/usr/include/features.h" 3 4
# 1 "/usr/include/x86_64-linux-gnu/sys/cdefs.h" 1 3 4
# 561 "/usr/include/x86_64-linux-gnu/sys/cdefs.h" 3 4
# 1 "/usr/include/x86_64-linux-gnu/bits/wordsize.h" 1 3 4
# 562 "/usr/include/x86_64-linux-gnu/sys/cdefs.h" 2 3 4
# 1 "/usr/include/x86_64-linux-gnu/bits/long-double.h" 1 3 4
# 563 "/usr/include/x86_64-linux-gnu/sys/cdefs.h" 2 3 4
# 488 "/usr/include/features.h" 2 3 4
# 511 "/usr/include/features.h" 3 4
# 1 "/usr/include/x86_64-linux-gnu/gnu/stubs.h" 1 3 4
# 10 "/usr/include/x86_64-linux-gnu/gnu/stubs.h" 3 4
# 1 "/usr/include/x86_64-linux-gnu/gnu/stubs-64.h" 1 3 4
# 11 "/usr/include/x86_64-linux-gnu/gnu/stubs.h" 2 3 4
# 512 "/usr/include/features.h" 2 3 4
# 34 "/usr/include/x86_64-linux-gnu/bits/libc-header-start.h" 2 3 4
# 28 "/usr/include/stdio.h" 2 3 4
```

file.s

```
        .file   "ppl1.c"
        .text
        .section        .rodata
        .align 8
.LC0:
        .string "\nAddition of two number is:%d\n"
        .text
        .globl  sum
        .type   sum, @function
sum:
.LFB0:
        .cfi_startproc
        endbr64
        pushq   %rbp
        .cfi_def_cfa_offset 16
        .cfi_offset 6, -16
        movq    %rsp, %rbp
        .cfi_def_cfa_register 6
        subq    $32, %rsp
        movl    %edi, -20(%rbp)
        movl    %esi, -24(%rbp)
        movl    -20(%rbp), %edx
        movl    -24(%rbp), %eax
        addl    %edx, %eax
        movl    %eax, -4(%rbp)
        movl    -4(%rbp), %eax
        movl    %eax, %esi
        leaq    .LC0(%rip), %rax
        movq    %rax, %rdi
        movl    $0, %eax
        call    printf@PLT
        nop
        leave
        .cfi_def_cfa 7, 8
        ret
        .cfi_endproc
.LFE0:
```

```
        .cfi_endproc
.LFE0:
        .size   sum, .-sum
        .section        .rodata
.LC1:
        .string "\nEnter first numbers:"
.LC2:
        .string "%d"
.LC3:
        .string "\nEnter second numbers:"
        .text
        .globl  main
        .type   main, @function
main:
.LFB1:
        .cfi_startproc
        endbr64
        pushq   %rbp
        .cfi_def_cfa_offset 16
        .cfi_offset 6, -16
        movq    %rsp, %rbp
        .cfi_def_cfa_register 6
        subq    $16, %rsp
        movq    %fs:40, %rax
        movq    %rax, -8(%rbp)
        xorl    %eax, %eax
        leaq    .LC1(%rip), %rax
        movq    %rax, %rdi
        movl    $0, %eax
        call    printf@PLT
        leaq    -16(%rbp), %rax
        movq    %rax, %rsi
        leaq    .LC2(%rip), %rax
        movq    %rax, %rdi
        movl    $0, %eax
        call    __isoc99_scanf@PLT
        leaq    .LC3(%rip), %rax
        movq    %rax, %rdi
```

a-ppl1.s

```asm
        leaq    -16(%rbp), %rax
        movq    %rax, %rsi
        leaq    .LC2(%rip), %rax
        movq    %rax, %rdi
        movl    $0, %eax
        call    __isoc99_scanf@PLT
        leaq    .LC3(%rip), %rax
        movq    %rax, %rdi
        movl    $0, %eax
        call    printf@PLT
        leaq    -12(%rbp), %rax
        movq    %rax, %rsi
        leaq    .LC2(%rip), %rax
        movq    %rax, %rdi
        movl    $0, %eax
        call    __isoc99_scanf@PLT
        movl    -12(%rbp), %edx
        movl    -16(%rbp), %eax
        movl    %edx, %esi
        movl    %eax, %edi
        call    sum
        movl    $0, %eax
        movq    -8(%rbp), %rdx
        subq    %fs:40, %rdx
        je      .L4
        call    __stack_chk_fail@PLT
.L4:
        leave
        .cfi_def_cfa 7, 8
        ret
        .cfi_endproc
.LFE1:
        .size   main, .-main
        .ident  "GCC: (Ubuntu 12.3.0-1ubuntu1~23.04) 12.3.0"
        .section        .note.GNU-stack,"",@progbits
        .section        .note.gnu.property,"a"
        .align 8
        .long   1f - 0f
        .long   4f - 1f
        .long   5
0:
        .string "GNU"
1:
        .align 8
        .long   0xc0000002
        .long   3f - 2f
2:
        .long   0x3
3:
        .align 8
```