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* **CODE**

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <fcntl.h>

#include <sys/stat.h>

#include <sys/types.h>

#include <string.h>

#include <ctype.h>

#define BUFFER\_SIZE 1024

int main()

{

int fd1, fd2;

char \*fifo1 = "/tmp/fifo1";

char \*fifo2 = "/tmp/fifo2";

char buffer[BUFFER\_SIZE];

mkfifo(fifo1, 0666);

mkfifo(fifo2, 0666);

pid\_t pid = fork();

if (pid > 0) { // Parent process

fd1 = open(fifo1, O\_WRONLY);

fd2 = open(fifo2, O\_RDONLY);

printf("Enter a sentence: ");

fgets(buffer, BUFFER\_SIZE, stdin);

write(fd1, buffer, strlen(buffer)+1);

close(fd1);

read(fd2, buffer, BUFFER\_SIZE);

printf("%s", buffer);

close(fd2);

} else if (pid == 0) { // Child process

fd1 = open(fifo1, O\_RDONLY);

fd2 = open(fifo2, O\_WRONLY);

read(fd1, buffer, BUFFER\_SIZE);

int num\_chars = strlen(buffer) - 1;

int num\_words = 0;

int num\_lines = 1;

for (int i = 0; buffer[i] != '\0'; i++) {

if (isspace(buffer[i])) {

num\_words++;

}

if (buffer[i] == '\n') {

num\_lines++;

}

}

char output[BUFFER\_SIZE];

sprintf(output, "Number of characters: %d\nNumber of words: %d\nNumber of lines: %d\n", num\_chars, num\_words, num\_lines);

int fd = open("output.txt", O\_WRONLY | O\_CREAT, 0666);

write(fd, output, strlen(output)+1);

close(fd);

fd = open("output.txt", O\_RDONLY);

read(fd, buffer, BUFFER\_SIZE);

write(fd2, buffer, strlen(buffer)+1);

close(fd);

close(fd1);

close(fd2);

}

unlink(fifo1);

unlink(fifo2);

return 0;

}

* **OUTPUT**

