```c
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>
#include <string.h>
#include <sys/wait.h>

#define FIFO1 "fifo1"
#define FIFO2 "fifo2"
#define MAX_BUF 1024

// Function to count characters, words, and lines in a string
void count_chars_words_lines(char *str, int *chars, int *words, int *lines) {
    *chars = *words = *lines = 0;
    int i = 0;

    while (str[i] != '\0') {
        // Count characters
        if (str[i] != ' ' && str[i] != '\t' && str[i] != '\n') {
            (*chars)++;
        }
        // Count words
        if ((str[i] == ' ' || str[i] == '\t') &&
            (str[i - 1] != ' ' && str[i - 1] != '\t' && str[i - 1] != '\n')) {
            (*words)++;
        }
        // Count lines
        if (str[i] == '\n') {
            (*lines)++;
```

```
        }
        i++;
    }

    // If the last character is not a newline, increment lines count
    if (str[i - 1] != '\n') {
        (*lines)++;
    }
}

int main() {
    int fd1, fd2;
    char buf[MAX_BUF];
    char filename[] = "output.txt";
    int chars, words, lines;

    // Create FIFOs
    mkfifo(FIFO1, 0666);
    mkfifo(FIFO2, 0666);

    pid_t pid = fork();

    if (pid == -1) {
        perror("fork");
        exit(EXIT_FAILURE);
    }

    if (pid == 0) { // Child process (Process 2)
        // Open FIFOs for reading and writing
        fd1 = open(FIFO1, O_RDONLY);
        fd2 = open(FIFO2, O_WRONLY);
```

```
    // Read sentences from FIFO1
    read(fd1, buf, MAX_BUF);

    // Count characters, words, and lines
    count_chars_words_lines(buf, &chars, &words, &lines);

    // Write counts to a file
    FILE *file = fopen(filename, "w");
    fprintf(file, "Character count: %d\n", chars);
    fprintf(file, "Word count: %d\n", words);
    fprintf(file, "Line count: %d\n", lines);
    fclose(file);

    // Write contents of the file to FIFO2
    file = fopen(filename, "r");
    while (fgets(buf, MAX_BUF, file) != NULL) {
        write(fd2, buf, strlen(buf) + 1);
    }
    fclose(file);

    // Close FIFOs
    close(fd1);
    close(fd2);

    // Remove FIFOs
    unlink(FIFO1);
    unlink(FIFO2);

    exit(EXIT_SUCCESS);
} else { // Parent process (Process 1)
```

```
    // Open FIFOs for writing and reading
    fd1 = open(FIFO1, O_WRONLY);
    fd2 = open(FIFO2, O_RDONLY);

    // Accept sentences from user and write them to FIFO1
    printf("Enter sentences (type 'exit' to end):\n");
    while (1) {
        fgets(buf, MAX_BUF, stdin);
        if (strncmp(buf, "exit", 4) == 0) {
            break;
        }
        write(fd1, buf, strlen(buf) + 1);
    }

    // Read contents from FIFO2 and display on standard output
    while (read(fd2, buf, MAX_BUF) > 0) {
        printf("%s", buf);
    }

    // Close FIFOs
    close(fd1);
    close(fd2);

    // Wait for the child process to complete
    wait(NULL);
  }

  return 0;
}
```