

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

#define FIFO1 "/faculty/abukmail/5531/fifo.1"
#define FIFO2 "/faculty/abukmail/5531/fifo.2"

#define FILE_MODE 0666
int main(int argc, char **argv)
{
    int readfd, writefd, n;
    pid_t childpid;
    char buff[100];

    /* create two FIFOs; OK if they already exist */
    if ((mkfifo(FIFO1, FILE_MODE) < 0) && (errno != EEXIST))
        printf("Cannot create %s : %s\n", FIFO1, strerror(errno));

    if ((mkfifo(FIFO2, FILE_MODE) < 0) && (errno != EEXIST)) {
        unlink(FIFO1);
        printf("Cannot create %s : %s\n", FIFO2, strerror(errno));
    }

    if ( (childpid = fork()) == 0) { /* child */
        readfd = open(FIFO1, O_RDONLY, 0);
        writefd = open(FIFO2, O_WRONLY, 0);
        write (writefd, "Hello from child\n", 17);
        n = read(readfd, buff, 100);
        buff[n] = '\0';
        printf("PID=%d  child read: %s\n", childpid, buff);
        exit(0);
    }
    /* parent */
    writefd = open(FIFO1, O_WRONLY, 0);
    readfd = open(FIFO2, O_RDONLY, 0);
    write (writefd, "Hello from parent\n", 18);
    n = read(readfd, buff, 100);
    buff[n] = '\0';
    printf("PID=%d  parent read: %s\n", childpid, buff);

    waitpid(childpid, NULL, 0); /* wait for child to terminate */
    close(readfd);
    close(writefd);
    unlink(FIFO1);
    unlink(FIFO2);
    exit(0);
}
```