

```
/* pipes.c
** -- using POSIX pipes
** cs180 1/08
*/

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <unistd.h>
#include <sys/wait.h>

int main(void)
{
    int pid;
    char buffer[1024];
    int descriptor[2];

    // pipe() is a system call returns 2 file descriptors
    //
    pipe(descriptor);
    /* descriptor[0] - for reading end
    ** descriptor[1] - for writing end
    */

    if(fork()==0)
    {
        /* child 1 */
        close(1);
        dup(descriptor[1]);
        close(descriptor[0]);
        /*how do we get ls.exe to print to the writing end of the pipe?*/
        execlp("ls", "ls", 0);
    }

    if(fork()==0)
    {
        /* child 2 */
        close(descriptor[1]); //close writing end
        close(0); //close stdin
        dup(descriptor[0]);
        execlp("cat", "cat", 0);
    }
    //write(descriptor[1], "hello world\n", 12);
    close(descriptor[1]); /*parents closed the pipes*/
    close(descriptor[0]); /*parents closed the pipes*/

    wait(NULL);
    wait(NULL);
    printf("finished\n");
    return 0;
}
```