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#include <stdio.h>
#include <unistd.h>
#include <string.h>
void syserr(char str[])
{
    perror(str);
    exit(1);
} /* sys_arr */
int main(int argc, char *argv[])
{
    int pfd[2], space=0;
    int pfd2[2];
    char msg[80];
    int status,i;
    char delims[] = " ";
    char *result = NULL;
    char *result2=NULL;
    if (pipe(pfd) == -1)
        syserr("pipe");
    if(pipe(pfd2)==-1)
        syserr("pipe2");
    gets(msg);
    //printf("asd:%s\n",msg);

    char Pipe[] = "|";
    char temp[80];
    char msg2[80],msg3[80];
    strcpy(temp,msg);
    char *argv3[3];
    char *argv2[3];
    result = strtok(msg, Pipe );
    result = strtok(msg,"|");
    i=0;
    while( result != NULL )
    {
        argv2[i]=result;
        i++;
        result = strtok( NULL, "|");
    }

    switch(fork())
    {
        case -1:
            syserr("fork");
        case 0:
            if (dup2(pfd[1], 1) == -1)
                syserr("dup2");
            if (close(pfd[0]) == -1 || close(pfd[1]) == -1)
                syserr("close");

            result2 = strtok(argv3[0], " ");
            int i;
            i=0;

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        while( result2 != NULL )
        {
            argv2[i]=result2;
            i++;
            result2 = strtok(NULL, " " );
        }

        argv2[i]=NULL;
        execvp(argv2[0], argv2);

} /* switch */

switch (fork())
{
    case -1: // error

        case 0:
            if (dup2(pfd[0], 0) == -1)
                syserr("dup2");

                if (close(pfd[0]) == -1 || close(pfd[1]) == -1)
                    syserr("close");
            if (dup2(pfd2[1], 1) == -1)
                syserr("dup2");
                if (close(pfd2[0]) == -1 || close(pfd2[1]) == -1)
                    syserr("close");

            result2 = strtok(argv3[1], " ");
            i=0;
            while( result2 != NULL )
            {
                argv2[i]=result2;
                i++;
                result2 = strtok(NULL, " " );
            }
            argv2[i]=NULL;
            execvp(argv2[0], argv2);

        }

switch (fork())
{
    case -1: // error
        perror("fork call");
        exit(1);

        case 0:
            if (dup2(pfd2[0], 0) == -1)
                syserr("dup2");
                if (close(pfd2[0]) == -1 || close(pfd2[1]) == -1)

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        syserr("close");

        result2 = strtok(argv3[2], " ");
        i=0;
        while( result2 != NULL )
        {
            argv2[i]=result2;
            i++;
            result2 = strtok(NULL, " ");
        }
        argv2[i]=NULL;
        execvp(argv2[0], argv2);

    }

    if (close(pfd[0]) == -1 || close(pfd[1]) == -1)
        syserr("close");
    while (wait(NULL)>0);
}
```