

Re: Redirection issue

Source: http://coding.derkeiler.com/Archive/C_CPP/comp.lang.c/2006-08/msg05416.html

- *From:* "souissipro" <souissipro@xxxxxxxx>
 - *Date:* 31 Aug 2006 10:30:47 -0700
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Ed Prochak wrote:

souissipro wrote:

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souissipro wrote:

Hi,

I have written a C program that does some of the functionalities mentioned in my previous topic posted some days ago. This shell should:

- 1- execute input commands from standard input, and also from a file containing the commands
- 2- does the redirection of the input and output from and to files.
- 3- retrieve the environment variables like HOME,..

I did the first question and it works fine, however when I modified the code to implement the redirection it does not work anymore.

Could you please have a look to my code and tell me which is wrong with?

I would also appreciate if you can tell me how to implement the 2nd question in the function `parse_line` (see the code below):

Thank you very much for your help on this

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Rather than us looking at your code, I have some general suggestions to help you help yourself.

First: describe the problem.
the phrase "it does not work anymore" carries very little meaning.
"does not work" could be anything from not compiling, not executing, crashing immediately, crashing the entire computer, and many other ways of "not working". You have a case of before and after. What did it do before that it does not do now? BE SPECIFIC. Properly defining the problem often leads to finding the right solution.

Second: isolate the changes.
Run a diff on the current and previous versions of the program (You do use a source control system don't you?) Determine how the changes could have broken the code that was working. For example, look for global variables with the same name as local variables. Watch for unterminated block comments. Other common errors.

Three: trace your steps.
If you cannot figure it out from those ideas, try adding some debug logging through the program OR run the program under a debugger.

Four: slash and burn.
If the problem is serious (e.g., crash and core dump) and nothing else helps you isolate it, then start removing parts of code from the current version until it no longer crashes, or you are back to the previous working version. Cutting the body of functions, leaving only a return, for example, may be useful.

You have a very good chance of finding the cause of this problem yourself since you went from a working version to a

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non-working
version. You'll be a better programmer by learning how to
find this
yourself. Just remember, the program is doing exactly what
you told it
to do.

ed

Hi ed,

Thanks for your comments. I would add the following information in
order to make things more clear:

In my program, I first implemented the three functions: `parse_line`,
`simple_cmd` and the main in order to execute input commands from
standard input, and also from input file. This works fine which means
after compilation and execution of the shell with a simple command like
"ls" or "pwd" I get the expected result. When I pass a file as input
all the command in the file are executed as well.

Now, I modified the function `parse_line` in order to manage the
input/output. I created a new function `redir_cmd` that receives the name
of files for input and output. I did a modification in the main:

if `argc==1` this means simple command;
if `argc==2` this means command from file and output `STDINOUT`;
if `argc==3` input from a file and the output directed to another file
instead of `STDINOUT`.

Please have a look to the shell for more details.

The new shell compiles fine but at the execution it does not execute
the commands of the input file and hence it does not make the output in
the output file.

My question is then could you please have a look to my shell and tell
me which is wrong there. I'm not expert in C and I need concrete help
on that.

Thanks in advance.

Souipro

My question is did you follow ANY of the suggestions I gave you? Your
error is very simple. I did look at your code and found the problem
right away. I really am trying to help you learn. This problem is
independent of the programming language. So please, review your own
code. before you scroll down to what I see as the root problem.

Hint, compare what you describe the program doing above with how the

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program is actually coded.

DON'T PEEK!

Final suggestion before revealing the answer: Take a printout of the program, go to a friend (even a nonprogrammer) and describe to them what each part of the program does. If that doesn't work, then look below

You never called the new function!

BTW, long term your approach is going about it the hard way, but you'll learn more this way.

Ed

Hi Ed,

Thank you anyway for your comments. I appreciate them very much. I uncommented the code in the new function `redir_cmd`, changed the types of `fd1` and `fd2` to `char` and the redirection works fine now. However, the simple command and the simple input file are now not working.

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Please any precise idea because I have to finish this shell for tomorrow.

Thanks,
souissipro

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