

```

Last login: Tue Mar 18 11:04:30 on ttys000
You have new mail.
/Users/felixnowman/.zprofile:7: command not found: rbenv
felixnowman@ec2-100-30-0-199 ~ % cd Desktop/course-3/Spring/SP/LAB_*
zsh: no matches found: Desktop/course-3/Spring/SP/LAB_*
felixnowman@ec2-100-30-0-199 ~ % cd Desktop/course-3/Spring/SP/LAB_8
cd: no such file or directory: Desktop/course-3/Spring/SP/LAB_8
felixnowman@ec2-100-30-0-199 ~ % cd Desktop/course-3/Spring/SP/LAB-8
felixnowman@ec2-100-30-0-199 LAB-8 % ls
labsysprog8.pdf
felixnowman@ec2-100-30-0-199 LAB-8 % vim P1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P1.c P1out
clang: error: no such file or directory: 'P1out'
clang: error: no input files
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P1out P1.c
felixnowman@ec2-100-30-0-199 LAB-8 % ./P1out -i -lr 'hi' -f fred.c
argument_0:._/P1out
option:_i
option:_lr
argument_3:_hi
option:_f
argument_5:_fred.c
felixnowman@ec2-100-30-0-199 LAB-8 % cat P1.c
#include <stdio.h>
#include <stdlib.h>

int main(int argc, char *argv[]){
    int arg;
    for (arg=0; arg < argc; arg++){
        if(argv[arg][0]=='-'){
            printf("option:_%s\n", argv[arg]+1);
        }else{
            printf("argument_%d:_%s\n", arg, argv[arg]);
        }
    }
    exit(0);
}

felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P2out P2.c
P2.c:2:10: fatal error: 'stdlib.h' file not found
  2 | #include <stdlib.h>
    |           ^~~~~~
1 error generated.
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P2out P2.c
P2.c:5:26: error: redefinition of parameter 'argc'
  5 | int main(int argc, char *argv[]){
    |                      ^
P2.c:5:14: note: previous declaration is here
  5 | int main(int argc, char *argv[]){
    |                      ^
P2.c:5:26: warning: omitting the parameter name in a function definition is a C2x extension
[-Wc2x-extensions]
  5 | int main(int argc, char *argv[]){
    |                      ^
P2.c:7:26: error: use of undeclared identifier 'argv'; did you mean 'argc'?
  7 |         while((opt=getopt(argc, argv,":if:lr")) !=-1){
    |                                ^~~~~
                                argc
P2.c:5:14: note: 'argc' declared here

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5 | int main(int argc, char *argv[]){
   | ^
P2.c:12:12: warning: missing terminating '"' character [-Winvalid-pp-token]
12 |         printf("option: %c\n, opt);
   |         ^
P2.c:12:12: error: expected expression
P2.c:15:12: warning: missing terminating '"' character [-Winvalid-pp-token]
15 |         printf("filename: %s\n, optarg);
   |         ^
P2.c:26:10: warning: missing terminating '"' character [-Winvalid-pp-token]
26 |         printf("arg: %c\n:, argv[optind]);
   |         ^
P2.c:26:10: error: expected expression
P2.c:31:1: error: expected '}'
31 |
   | ^
P2.c:7:47: note: to match this '{'
7 |         while((opt=getopt(argc, argv,":if:lr")) !=-1){
   |                                     ^
P2.c:31:1: error: expected '}'
31 |
   | ^
P2.c:5:33: note: to match this '{'
5 | int main(int argc, char *argv[]){
   | ^
4 warnings and 6 errors generated.
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P2out P2.c
P2.c:12:12: warning: missing terminating '"' character [-Winvalid-pp-token]
12 |         printf("option: %c\n, opt);
   |         ^
P2.c:12:12: error: expected expression
P2.c:15:12: warning: missing terminating '"' character [-Winvalid-pp-token]
15 |         printf("filename: %s\n, optarg);
   |         ^
P2.c:26:10: warning: missing terminating '"' character [-Winvalid-pp-token]
26 |         printf("arg: %c\n:, argv[optind]);
   |         ^
P2.c:26:10: error: expected expression
P2.c:31:1: error: expected '}'
31 |
   | ^
P2.c:7:47: note: to match this '{'
7 |         while((opt=getopt(argc, argv,":if:lr")) !=-1){
   |                                     ^
P2.c:31:1: error: expected '}'
31 |
   | ^
P2.c:5:33: note: to match this '{'
5 | int main(int argc, char *argv[]){
   | ^
3 warnings and 4 errors generated.
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P2out P2.c
P2.c:20:12: error: expected ':' after 'case'
20 |         case '?';
   |         ^
P2.c:26:10: warning: missing terminating '"' character [-Winvalid-pp-token]
26 |         printf("arg: %c\n:, argv[optind]);
   |         ^
P2.c:26:10: error: expected expression
P2.c:31:1: error: expected '}'

```

```

31 |
    ^
P2.c:5:33: note: to match this '{'
    5 | int main(int argc, char *argv[]){
        ^
1 warning and 3 errors generated.
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P2out P2.c
P2.c:26:10: warning: missing terminating '"' character [-Winvalid-pp-token]
    26 |         printf("arg: %c\n:", argv[optind]);
           ^
P2.c:26:10: error: expected expression
P2.c:31:1: error: expected '}'
    31 |
        ^
P2.c:5:33: note: to match this '{'
    5 | int main(int argc, char *argv[]){
        ^
1 warning and 2 errors generated.
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P2out P2.c
P2.c:26:24: warning: format specifies type 'int' but the argument has type 'char *' [-Wformat]
    26 |         printf("arg: %c\n:", argv[optind]);
           ~~~~~ ~~~~~~
           %s
1 warning generated.
felixnowman@ec2-100-30-0-199 LAB-8 % vim P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o P2out P2.c
felixnowman@ec2-100-30-0-199 LAB-8 % ./P2out
felixnowman@ec2-100-30-0-199 LAB-8 % ./P2out -i -lr 'lll' -f
option: i
option: l
option: r
arg: lll
:arg: -f
:
felixnowman@ec2-100-30-0-199 LAB-8 %
felixnowman@ec2-100-30-0-199 LAB-8 %
felixnowman@ec2-100-30-0-199 LAB-8 % vim T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o T1Out T1.c
T1.c:7:18: error: expected ')'
    7 | int main(int argc; char *argv[]){
        ^
T1.c:7:9: note: to match this '('
    7 | int main(int argc; char *argv[]){
        ^
T1.c:7:5: warning: only one parameter on 'main' declaration [-Wmain]
    7 | int main(int argc; char *argv[]){
        ^
T1.c:7:32: error: expected ';' after top level declarator
    7 | int main(int argc; char *argv[]){
        ^
T1.c:7:26: warning: tentative array definition assumed to have one element
    7 | int main(int argc; char *argv[]){
        ^
2 warnings and 2 errors generated.
felixnowman@ec2-100-30-0-199 LAB-8 % vim T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o T1Out T1.c
T1.c:10:39: error: subscripted value is not an array, pointer, or vector
   10 |         printf("usage is %s [options]", argc[0]);
           ~~~~~~

```

1 error generated.

```
felixnowman@ec2-100-30-0-199 LAB-8 % vim T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o T1Out T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % vim T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o T1Out T1.c
T1.c:16:3: error: expected '}'
```

```
16 |         {"version", 0, NULL, 'v'}
    |         ^
```

T1.c:14:27: note: to match this '{'

```
14 |         struct option longopts[]={
    |                                   ^
```

1 error generated.

```
felixnowman@ec2-100-30-0-199 LAB-8 % vim T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o T1Out T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % vim T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o T1Out T1.c
```

T1.c:21:3: error: call to undeclared function 'swtich'; ISO C99 and later do not support implicit function declarations [-Wimplicit-function-declaration]

```
21 |         swtich(opt){
    |         ^
```

T1.c:21:14: error: expected ';' after expression

```
21 |         swtich(opt){
    |                                   ^
    |                                   ;
```

T1.c:22:4: error: 'case' statement not in switch statement

```
22 |         case 'h':
    |         ^
```

T1.c:25:4: error: 'case' statement not in switch statement

```
25 |         case 'v':
    |         ^
```

T1.c:26:4: error: 'case' statement not in switch statement

```
26 |         case 'i':
    |         ^
```

T1.c:27:4: error: 'case' statement not in switch statement

```
27 |         case '?':
    |         ^
```

T1.c:28:4: error: 'default' statement not in switch statement

```
28 |         default:
    |         ^
```

7 errors generated.

```
felixnowman@ec2-100-30-0-199 LAB-8 % vim T1.c
felixnowman@ec2-100-30-0-199 LAB-8 % gcc -o T1Out T1.c
felixnowman@ec2-100-30-0-199 LAB-8 %
```