

Last login: Sat Mar 1 12:49:01 on ttys002

You have new mail.

/Users/felixnowman/.zprofile:7: command not found: rbench

felixnowman@ec2-100-30-2-65 ~ % ls

```
AndroidStudioProjects      Music
Applications                Pictures
Desktop                    Postman
Documents                  Public
Downloads                  PycharmProjects
IdeaProjects               iCloud Drive (Archive)
IdeaSnapshots              ingeger.sh
Library                    java_error_in_studio.hprof
Movies                     typescript
felixnowman@ec2-100-30-2-65 ~ % cd Desktop/course-3/Spring/S
P/LAB-6
```

felixnowman@ec2-100-30-2-65 LAB-6 % ls

labsysprog6.pdf

felixnowman@ec2-100-30-2-65 LAB-6 % vim sample.txt

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:14:25: error: use of undeclared identifier 'SEEK_OUT'

```
14 |         off_t bytes=lseek(fd,5,SEEK_OUT);
    |                                     ^
```

Q1.c:15:9: error: unexpected type name 'off_t': expected expression

```
15 |         printf(off_t)
    |                 ^
```

Q1.c:15:15: error: expected ';' after expression

```
15 |         printf(off_t)
    |                 ^
    |                 ;
```

3 errors generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:14:25: error: use of undeclared identifier 'SEEK_OUT'

```
14 |         off_t bytes=lseek(fd,5,SEEK_OUT);
    |                                     ^
```

Q1.c:15:9: error: unexpected type name 'off_t': expected expression

```
15 |         printf(off_t)
```

```

      |
      ^
Q1.c:15:15: error: expected ';' after expression
15 |         printf(off_t)
      |
      ^
      ;

```

3 errors generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:15:9: error: unexpected type name 'off_t': expected expression

```

15 |         printf(off_t);
      |
      ^

```

1 error generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:15:9: error: incompatible integer to pointer conversion passing 'off_t' (aka 'long long') to parameter of type 'const char *' [-Wint-conversion]

```

15 |         printf(pos_bytes);
      |
      ^~~~~~

```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/_printf.h:31:36: note: passing argument to parameter here

```

31 | int      printf(const char * __restrict, ...) __printr
    |
    ^

```

Q1.c:15:9: warning: format string is not a string literal (potentially insecure) [-Wformat-security]

```

15 |         printf(pos_bytes);
      |
      ^~~~~~

```

Q1.c:15:9: note: treat the string as an argument to avoid this

```

15 |         printf(pos_bytes);
      |
      ^
      "%s",

```

1 warning and 1 error generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:15:8: error: expected ';' after expression

```

15 |         printf"lseek", (pos_bytes);

```

```

|
|
|
Q1.c:15:2: warning: expression result unused [-Wunused-value]

```

```

15 |         printf("lseek", (pos_bytes);
|         ^~~~~~

```

```

Q1.c:15:8: warning: left operand of comma operator has no effect [-Wunused-value]

```

```

15 |         printf("lseek", (pos_bytes);
|         ^~~~~~

```

```

Q1.c:15:18: warning: expression result unused [-Wunused-value]

```

```

15 |         printf("lseek", (pos_bytes);
|         ^~~~~~

```

3 warnings and 1 error generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

```

Q1.c:15:18: warning: data argument not used by format string [-Wformat-extra-args]

```

```

15 |         printf("lseek", pos_bytes);
|         ~~~~~~ ^

```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

```

Q1.c:15:24: warning: format specifies type 'long' but the argument has type 'off_t' (aka 'long long') [-Wformat]

```

```

15 |         printf("lseek %ld\n", pos_bytes);
|         ~~~~ ^~~~~~
|
|         %lld

```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

```

Q1.c:15:23: warning: format specifies type 'int' but the argument has type 'off_t' (aka 'long long') [-Wformat]

```

```

15 |         printf("lseek %d\n", pos_bytes);
|         ~~~ ^~~~~~
|
|         %lld

```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:15:24: warning: format specifies type 'long' but the argument has type 'off_t' (aka 'long long') [-Wformat]

```
15 |         printf("lseek %ld\n", pos_bytes);
    |                                ~~~      ^~~~~~
    |                                %lld
```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:15:24: warning: format specifies type 'long' but the argument has type 'int' [-Wformat]

```
15 |         printf("lseek %ld\n", pos_bytes);
    |                                ~~~      ^~~~~~
    |                                %d
```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % ./Q1out

open: No such file or directory

felixnowman@ec2-100-30-2-65 LAB-6 % ls

1 Q1.c Q1out labsysprog6.

pdf sample.txt

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

Q1.c:21:2: warning: array index 10 is past the end of the array (that has type 'char[10]') [-Warray-bounds]

```
21 |         buffer[10]='\0';
    |         ^      ~~~
```

Q1.c:7:2: note: array 'buffer' declared here

```
7 |         char buffer[10];
  |         ^
```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q1out Q1.c

felixnowman@ec2-100-30-2-65 LAB-6 % ./Q1out

lseek 5

readed data vvvvvvbbbb?

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q2.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q2out Q2.c

felixnowman@ec2-100-30-2-65 LAB-6 % ./Q2out

info about original file

```

size of file 58inode file 33454999
felixnowman@ec2-100-30-2-65

LAB-6 % vim Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % ./Q2out
info about original file
size of file 58inode file 33454999
felixnowman@ec2-100-30-2-65

LAB-6 % gcc -o Q2out Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % ./Q2out
info about original file
size of file 58
inode file 33454999
felixnowman@ec2-100-30-2-65

LAB-6 % vim Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q2out Q2.c
Q2.c:11:15: error: use of undeclared identifier 'mode'
    11 |         if(S_IFREG & mode){
        |                               ^
1 error generated.
felixnowman@ec2-100-30-2-65 LAB-6 % vim Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q2out Q2.c
Q2.c:11:24: error: expected ';' at end of declaration
    11 |         mode_t mode=st.st_mode
        |                               ^
        |                               ;
1 error generated.
felixnowman@ec2-100-30-2-65 LAB-6 % vim Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q2out Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % ./Q2out
info about original file
size of file 58
inode file 33454999regular file
felixnowman@ec2-100-30-2-65

LAB-6 % vim Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q2out Q2.c
felixnowman@ec2-100-30-2-65 LAB-6 % ./Q2out
info about original file
size of file 58
inode file 33454999regular file
felixnowman@ec2-100-30-2-65 LAB-6 % ln -l sample.txt symSamp

```

```

le.txt
ln: illegal option -- l
usage: ln [-s [-F] | -L | -P] [-f | -i] [-hnv] source_file [
target_file]
        ln [-s [-F] | -L | -P] [-f | -i] [-hnv] source_file .
.. target_dir
        link source_file target_file
felixnowman@ec2-100-30-2-65 LAB-6 % ls -l sample.txt symSamp
le.txt
ls: symSample.txt: No such file or directory
-rw-r--r--  1 felixnowman  staff  58 Mar  4 11:09 sample.txt
felixnowman@ec2-100-30-2-65 LAB-6 % ls -l symSample.txt sam
ple.txt
ls: symSample.txt: No such file or directory
-rw-r--r--  1 felixnowman  staff  58 Mar  4 11:09 sample.txt
felixnowman@ec2-100-30-2-65 LAB-6 % ls -s symSample.txt sam
ple.txt
ls: symSample.txt: No such file or directory
8 sample.txt
felixnowman@ec2-100-30-2-65 LAB-6 % ls
1                Q1out                Q2out                sample.txt
Q1.c              Q2.c              labsysprog6.pdf
felixnowman@ec2-100-30-2-65 LAB-6 % ls -s sample.txt symSamp
le.txt
ls: symSample.txt: No such file or directory
8 sample.txt
felixnowman@ec2-100-30-2-65 LAB-6 % ln -s sample.txt symSamp
le.txt
felixnowman@ec2-100-30-2-65 LAB-6 % ls
1                Q1out                Q2out                sample.txt
Q1.c              Q2.c              labsysprog6.pdf  symSample.tx
t
felixnowman@ec2-100-30-2-65 LAB-6 % ./Q2out

info about original file
size of file 58
inode file 33454999regular file
felixnowman@ec2-100-30-2-65 LAB-6 % vim Q3.c
felixnowman@ec2-100-30-2-65 LAB-6 % cat Q1.c Q2.c Q3.c
#include <stdio.h>

```

```

#include <fcntl.h>
#include <unistd.h>
#include <sys/types.h>
int main(){
    int fd = open("sample.txt", O_RDONLY);
    char buffer[10];
    ssize_t bytes_read;

    if (fd== -1){
        perror("open");
        return -1;
    }
    int pos_bytes = lseek(fd,5,SEEK_SET);
    printf("lseek %d\n", pos_bytes);

    if(read(fd,buffer,10)==-1){
        perror("read");
        return -1;
    }

    printf("readed data %s\n", buffer);
    return 0;
}

#include <stdio.h>
#include <sys/stat.h>
#include <stdlib.h>

int main(){
    struct stat st;
    stat("sample.txt",&st);
    printf("info about original file\n");
    printf("size of file %lld\n", st.st_size);
    printf("inode file %lld", st.st_ino);
    mode_t mode=st.st_mode;
    if(S_ISREG(mode)){
        printf("regular file\n");
    }
    if(S_ISLNK(mode)){
        printf("symbolic link\n");
    }
}

```

```

        return 0;
}

#include <stdlib.h>
#include <stdio.h>
#include <fcntl.h>

int main(){
    int fd= open("sample.txt", O_RDONLY);
    if (fd == -1){
        perror("error open file");
        return -1;
    }
}

```

Q3.c:7:18: **error:** expected ';' at end of declaration

```
Q3.c:13:15: error: call to undeclared function 'dup'; ISO C9
9 and later do not support implicit function declarations [-
Wimplicit-function-declaration]
```

Q3.c:13:22: **error:** expected ';' at end of declaration

Q3.c:18:2: **error:** call to undeclared function 'read'; ISO C99 and later do not support implicit function declarations [-Wimplicit-function-declaration]

Q3.c:18:2: note: did you mean 'fread'?


```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.  
platform/Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:245:
```

```
9: note: 'fread' declared here
```

```
245 | size_t fread(void * __restrict __ptr, size_t __siz  
e, size_t __nitems, FILE * __restrict __stream);
```

```
|
```

```
^
```

```
Q3.c:23:31: error: expected ';' after expression
```

```
23 | perror("error opening file")
```

```
|
```

```
^
```

```
|
```

```
;
```

```
5 errors generated.
```

```
felixnowman@ec2-100-30-2-65 LAB-6 % vim Q3.c
```

```
felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q3out Q3.c
```

```
Q3.c:13:15: error: call to undeclared function 'dup'; ISO C9  
9 and later do not support implicit function declarations [-  
Wimplicit-function-declaration]
```

```
13 | int new_fd = dup(fd);
```

```
|
```

```
^
```

```
Q3.c:18:2: error: call to undeclared function 'read'; ISO C9  
9 and later do not support implicit function declarations [-  
Wimplicit-function-declaration]
```

```
18 | read(new_fd,buffer,20);
```

```
|
```

```
^
```

```
Q3.c:18:2: note: did you mean 'fread'?
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.  
platform/Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:245:
```

```
9: note: 'fread' declared here
```

```
245 | size_t fread(void * __restrict __ptr, size_t __siz  
e, size_t __nitems, FILE * __restrict __stream);
```

```
|
```

```
^
```

```
2 errors generated.
```

```
felixnowman@ec2-100-30-2-65 LAB-6 % vim Q3.c
```

```
felixnowman@ec2-100-30-2-65 LAB-6 % vim Q4.c
```

```
felixnowman@ec2-100-30-2-65 LAB-6 % vim Q4.c
```

```
felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q4out Q4.c
```

```
Q4.c:10:18: error: expected expression
```

```
10 | sprintf(buffer, %ld, %ld, %ld, st.st_size,st  
.st_mtime,st.st_inode);
```

```
|
```

```
^
```

```
Q4.c:10:19: error: use of undeclared identifier 'ld'
```

```
10 |         sprintf(buffer, %ld, %ld, %ld, st.st_size, st
.st_mtime, st.st_inode);
```

```
|
Q4.c:10:23: error: expected expression
```

```
10 |         sprintf(buffer, %ld, %ld, %ld, st.st_size, st
.st_mtime, st.st_inode);
```

```
|
Q4.c:10:24: error: use of undeclared identifier 'ld'
```

```
10 |         sprintf(buffer, %ld, %ld, %ld, st.st_size, st
.st_mtime, st.st_inode);
```

```
|
Q4.c:10:28: error: expected expression
```

```
10 |         sprintf(buffer, %ld, %ld, %ld, st.st_size, st
.st_mtime, st.st_inode);
```

```
|
Q4.c:10:29: error: use of undeclared identifier 'ld'
```

```
10 |         sprintf(buffer, %ld, %ld, %ld, st.st_size, st
.st_mtime, st.st_inode);
```

```
|
Q4.c:10:59: error: no member named 'st_inode' in 'struct sta
t'
```

```
10 |         sprintf(buffer, %ld, %ld, %ld, st.st_size, st
.st_mtime, st.st_inode);
```

```
|
~~ ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.
platform/Developer/SDKs/MacOSX.sdk/usr/include/secure/_stdio
.h:47:56: note: expanded from macro 'sprintf'
```

```
47 |     __builtin__sprintf_chk (str, 0, __darwin_obsz(str
), __VA_ARGS__)
```

```
|
^~~~~~
```

7 errors generated.

```
felixnowman@ec2-100-30-2-65 LAB-6 % find . -type f \( -iname
 "*.jpg" -o -iname "*.jpeg" -o -iname "*.png" -o -iname "*.g
if" -o -iname "*.bmp" -o -iname "*.webp" \)
```

```
felixnowman@ec2-100-30-2-65 LAB-6 % cat Q4.c
#include <stdio.h>
#include <sys/types.h>
```

```
#include <unistd.h>
#include <fcntl.h>
#include <sys/stat.h>
int main(){
    struct stat st;
    char buffer[100];
    stat("sample.txt" , &st);
    sprintf(buffer, %ld, %ld, %ld, st.st_size,st.st_mtime,st.st_inode);

    printf("meta information about file %s", buffer);
}
```

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q4.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q4out Q4.c

Q4.c:10:18: error: expected expression

```
10 |          sprintf(buffer, %ld %ld %ld, st.st_size,st.s
t_mtime,st.st_inode);
    |                                     ^
```

Q4.c:10:19: error: use of undeclared identifier 'ld'

```
10 |          sprintf(buffer, %ld %ld %ld, st.st_size,st.s
t_mtime,st.st_inode);
    |                                     ^
```

Q4.c:10:23: error: use of undeclared identifier 'ld'

```
10 |          sprintf(buffer, %ld %ld %ld, st.st_size,st.s
t_mtime,st.st_inode);
    |                                     ^
```

Q4.c:10:27: error: use of undeclared identifier 'ld'

```
10 |          sprintf(buffer, %ld %ld %ld, st.st_size,st.s
t_mtime,st.st_inode);
    |                                     ^
```

Q4.c:10:57: error: no member named 'st_inode' in 'struct stat'

```
10 |          sprintf(buffer, %ld %ld %ld, st.st_size,st.s
t_mtime,st.st_inode);
    |                                     ^
    ~ ~ ^
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.
platform/Developer/SDKs/MacOSX.sdk/usr/include/secure/_stdio.
h:47:56: note: expanded from macro 'sprintf'

```
47 |    __builtin__sprintf_chk (str, 0, __darwin_obsz(str
```

```
), __VA_ARGS__)  
|
```

^~~~~~

5 errors generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q4.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q4out Q4.c

Q4.c:17:36: warning: format specifies type 'long' but the argument has type 'off_t' (aka 'long long') [-Wformat]

```
17 |     sprintf(buffer, "%ld %ld %ld", st.st_size, st.st  
_mtime, st.st_ino);
```

```
|
```

~~~

^~~~~~

```
|
```

%lld

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.  
platform/Developer/SDKs/MacOSX.sdk/usr/include/secure/\_stdio

.h:47:56: note: expanded from macro 'sprintf'

```
47 |     __builtin__sprintf_chk (str, 0, __darwin_obsz(str  
) , __VA_ARGS__)
```

```
|
```

^~~~~~

**Q4.c:17:61: warning: format specifies type 'long' but the argument has type '\_\_darwin\_ino64\_t' (aka 'unsigned long long') [-Wformat]**

```
17 |     sprintf(buffer, "%ld %ld %ld", st.st_size, st.st  
_mtime, st.st_ino);
```

```
|
```

~~~

^~~~~~

```
|
```

%llu

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.
platform/Developer/SDKs/MacOSX.sdk/usr/include/secure/_stdio

.h:47:56: note: expanded from macro 'sprintf'

```
47 |     __builtin__sprintf_chk (str, 0, __darwin_obsz(str  
) , __VA_ARGS__)
```

```
|
```

^~~~~~

2 warnings generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q4.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q4out Q4.c

Q4.c:17:51: warning: format specifies type 'long long' but the argument has type '__darwin_time_t' (aka 'long') [-Wformat]

```

17 |     sprintf(buffer, "%lld %lld %lld", st.st_size, st
.st_mtime, st.st_ino);
    |     ~~~~~^~
~~~~~

```

```

    |                                     %ld
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.
platform/Developer/SDKs/MacOSX.sdk/usr/include/secure/_stdio
.h:47:56: note: expanded from macro 'sprintf'

```

```

47 |     __builtin__sprintf_chk (str, 0, __darwin_obsz(str
), __VA_ARGS__)
    |
    ^~~~~~

```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % ls

```

1          Q2.c          Q4.c          sample.txt
Q1.c          Q2out          Q4out          symSample.tx
t

```

```

Q1out          Q3.c          labsysprog6.pdf

```

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q4.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q4out Q4.c

```

Q4.c:17:51: warning: format specifies type 'unsigned long lo
ng' but the argument has type '__darwin_time_t' (aka 'long')
[-Wformat]

```

```

17 |     sprintf(buffer, "%lld %llu %lld", st.st_size, st
.st_mtime, st.st_ino);
    |     ~~~~~^~
~~~~~

```

```

    |                                     %ld
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.
platform/Developer/SDKs/MacOSX.sdk/usr/include/secure/_stdio
.h:47:56: note: expanded from macro 'sprintf'

```

```

47 |     __builtin__sprintf_chk (str, 0, __darwin_obsz(str
), __VA_ARGS__)
    |
    ^~~~~~

```

1 warning generated.

felixnowman@ec2-100-30-2-65 LAB-6 % vim Q4.c

felixnowman@ec2-100-30-2-65 LAB-6 % gcc -o Q4out Q4.c

felixnowman@ec2-100-30-2-65 LAB-6 % ./Q4out

Meta information about file: 58 1741068559 33454999