

Re: question

Source: http://coding.derkeiler.com/Archive/C_CPP/comp.lang.c/2008-01/msg01668.html

- *From:* "Bill Cunningham" <nospam@xxxxxxxx>
 - *Date:* Sun, 13 Jan 2008 17:05:53 GMT
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"Keith Thompson" <kst-u@xxxxxxx> wrote in message
<news:87fxx2s8al.fsf@xxxxxxxxxxxxxxxxxxxxxxxx>

"Bill Cunningham" <nospam@xxxxxxxx> writes:

I wrote this small program to read a 512 block of binary data and write the same to a file. My code compiled well. The only thing is when I ran the compilers binary instead of a data file of 512 bytes I got one of 2048 bytes.

```
#include <stdio.h>
```

```
main(){
```

```
"int main(void) {"
```

```
int buf[512];  
FILE *fp;  
fp=fopen("r.dsk","rb");  
if (fp==NULL) {printf("Error"); exit(0);}
```

You need "#include <stdlib.h>" for exit.

```
fread(buf,sizeof(int),512,fp);
```

No error checking.

```
fclose(fp);
```

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No error checking (yes, fclose can fail).

I don't remember reading that in my literature. Thanks for the tip.

```
fp=fopen("dat","wb");  
if (fp==NULL) {printf("Error");}
```

Above, you printed an error message and terminated the program. Here you print an error message and continue.

```
fwrite(buf,sizeof(int),512,fp);
```

No error checking.

```
fclose(fp);}
```

No error checking (yes, fclose can fail).

Add "return 0;".

Please put the closing "}" on a line by itself. It's very difficult to see.

Is it the code or some overhead from the compiler or linker?

And finally, the answer to your question:

The program is doing exactly what it's supposed to do. Read the documentation for fread() and fwrite(). They both take two size_t arguments, the size in bytes of each element and the number of elements. You're asking fread() to read 512 element, each of which is sizeof(int) bytes (in other words, 512 ints, not 512 bytes). If int is 4 bytes on your system, you'll read and write 2048 bytes (assuming there are no errors).

One more thing: it's conventional to print error messages to stderr, and to use the argument to exit() to indicate success or failure. Rather than

```
if (fp==NULL) {printf("Error"); exit(0);}
```

I'd write:

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```
if (fp == NULL) {  
    fprintf(stderr, "Error\n");  
    exit(EXIT_FAILURE);  
}
```

Okay. stderr. I skipped ahead in the tutorial to write this. But I'm actually learning C! If I could get as good at as I am Basic I'll be like Richard Heathfield or Ben Pfaff. Maybe even dmr. It's great to have a community.

Yes, I also changed the code layout. Whitespace is not in short supply; use as much as you need to make the code clear and readable.

This is a question of style. That I'll have to learn. All my code so far is snippets. I'll have to catch up on that :)

Bill

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