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Howto Compiling C program and creating executable file under Linux / UNIX / *BSD

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How do I compile C program and create an executable file under Linux or UNIX operating systems?

You need GNU project C and C++ compiler for compiling C program and creating an executable file. Most Unix and Linux (*BSD) user start compiling their C program by the name cc. But you can use gcc command to compile program. First make sure you have gcc installed:



[1]

Make Sure Compiler Is Installed

Type the following command to verify that gcc is installed:

```
which gcc
```

Output:

```
/usr/bin/gcc
```

Find out version of gcc:

```
$ gcc --version
```

Output:

```
gcc (GCC) 4.0.3 20060212 (prerelease) (Debian 4.0.2-9)
Copyright (C) 2006 Free Software Foundation, Inc.
This is free software; see the source for copying conditions. There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
```

To compile C program you need to use syntax as follows:

gcc program.c -o program-output

Writing Your First C Program Under Linux / UNIX

Use a text editor such as vi or gedit to create a C program called first.c:

```
$ vi first.c
```

Type the following lines (program):

```
#include <stdio.h>
int main(void){
printf [2] ("My first C program\n");
return 0;
}
```

How Do I Compile My Program?

To compile C program first.c, and create an executable file called first, enter:

```
$ gcc first.c -o first
```

OR

```
$ cc first.c -o first
```

To execute program first, enter:

```
$ ./first
```

Output:

```
My first C program
```

However, both FreeBSD and Linux support direct make (GNU make utility to maintain groups of programs) command on C program without writing a make file. Remove, first program using the rm command:

```
$ rm first  
$ make first
```

Output:

```
cc first.o -o first
```

Execute program first:

```
$ ./first
```

Please note that above hack works with GNU make only.

See also:

- [Linux/FreeBSD \(GNU GCC\) Common option to C compiler](#)^[3]

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[1] Image: <http://www.cyberciti.biz/faq/faq/category/unix/>

[2] [printf](#): <http://www.opengroup.org/onlinepubs/009695399/functions/printf.html>

[3] Linux/FreeBSD (GNU GCC) Common option to C compiler: <http://www.cyberciti.biz/faq/tips/linuxfreebsd-gnu-gcc-common-option-to-c-compiler.html>