


- 1) Write a simple program for nested comments. what is the error & how we resolve it?



The screenshot shows a C program in a text editor with a 'Run' button and an 'Output' window. The code is as follows:

```
1 // Online C compiler to run C program online
2 #include <stdio.h>
3
4 int main() {
5     // Write C code here
6     /*
7     printf("1. Hello world\n");
8     /*
9     printf("2. Hello world\n");
10    */
11    printf("3. Hello world\n");
12    printf("4. Hello world\n");
13    */
14    return 0;
15 }
```

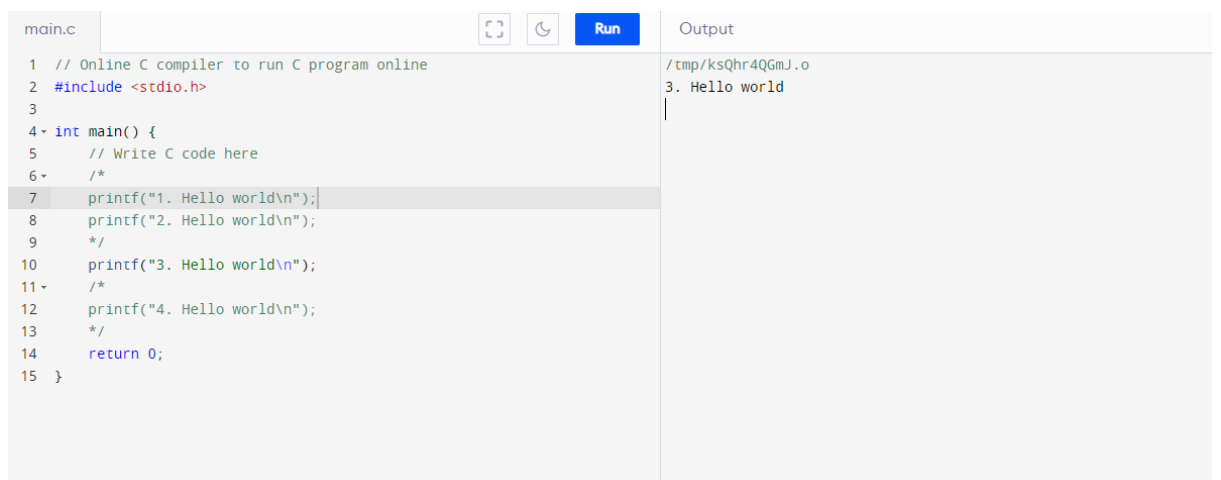
The output window shows the following error message:

```
gcc /tmp/ksQhr4QGmJ.c -lm
/tmp/ksQhr4QGmJ.c: In function 'main':
/tmp/ksQhr4QGmJ.c:13:6: error: expected expression before '/' token
13 |     */
   |     ^
```

We should not write nested comments. `/*` at Line 6 starts commenting code and ignores `/*` at line 8 as its looking for `*/` to end comment. So now comments will end at line 10. That's the reason we are getting error at line 13.

`/*`: start comments and `*/`: stop comments

If we should comment out code as below, which will print "3. Hello world".



The screenshot shows the same C program, but with the first two printf statements commented out. The code is as follows:

```
1 // Online C compiler to run C program online
2 #include <stdio.h>
3
4 int main() {
5     // Write C code here
6     /*
7     printf("1. Hello world\n");
8     printf("2. Hello world\n");
9     */
10    printf("3. Hello world\n");
11    /*
12    printf("4. Hello world\n");
13    */
14    return 0;
15 }
```

The output window shows the following output:

```
/tmp/ksQhr4QGmJ.o
3. Hello world
```

- 2) A block of code is given to you and comment out all the code.

| main.c | Output |
|---|------------------------------|
| <pre>1 #include <stdio.h> 2 int main() 3 { 4 /* 5 char ch1, ch2, ch3; 6 ch1 = 65; 7 ch2 = 'b'; 8 ch3 = '3'; 9 printf("ch1 = %c\n", ch1); 10 printf("ch2 = %c\n", ch2); 11 printf("ch3 = %c\n", ch3); 12 printf("ch1 = %d\n", ch1); 13 printf("ch2 = %d\n", ch2); 14 printf("ch3 = %d\n", ch3); 15 */ 16 }</pre> | <pre>/tmp/Vfh0uwHxQ9.o</pre> |

3) Execute the following code and note down the outputs.

| main.c | Output |
|--|---|
| <pre>1 #include <stdio.h> 2 int main() 3 { 4 5 char ch1, ch2, ch3; 6 ch1 = 65; 7 ch2 = 'b'; 8 ch3 = '3'; 9 printf("ch1 = %c\n", ch1); 10 printf("ch2 = %c\n", ch2); 11 printf("ch3 = %c\n", ch3); 12 printf("ch1 = %d\n", ch1); 13 printf("ch2 = %d\n", ch2); 14 printf("ch3 = %d\n", ch3); 15 16 }</pre> | <pre>/tmp/Vfh0uwHxQ9.o ch1 = A ch2 = b ch3 = 3 ch1 = 65 ch2 = 98 ch3 = 51</pre> |