# Compiler Design Lab

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1)

Code -

```c
//21BRS1088
#include <stdio.h>
#include <string.h>
#include <stdbool.h>
void detectComments(char *code) {
    int i = 0;

    while (code[i] != '\0') {
        if (code[i] == '/' && code[i + 1] == '/') {
            // Single-line comment
            while (code[i] != '\n' && code[i] != '\0') {
                putchar(code[i]);
                i++;
            }
            putchar('\n');

        }
        else if (code[i] == '/' && code[i + 1] == '*') {
            // Multi-line comment
            i += 2;
            while (!(code[i] == '*' && code[i + 1] == '/')) {
                putchar(code[i]);
                i++;

            }
            i += 2;

        } else {
            i++;
        }
    }

}
int main() {
```

```c
    char code[1000];
    char delimiter[] = "$$$";
    int count;
    printf("End code with %s \n",delimiter);
    printf("Enter the C code \n");

    char line[100];
    while (fgets(line, sizeof(line), stdin) != NULL) {
        if (strstr(line, delimiter) != NULL) {
            break;
        }
        strcat(code, line);
    }
    printf("\nComments:\n");
    detectComments(code);
    return 0;
}
```

```c
1  //21BRS1088
2  #include <stdio.h>
3  #include <string.h>
4  #include <stdbool.h>
5  void detectComments(char *code) {
6      int i = 0;
7
8      while (code[i] != '\0') {
9          if (code[i] == '/' && code[i + 1] == '/') {
10             // Single-line comment
11             while (code[i] != '\n' && code[i] != '\0') {
12                 putchar(code[i]);
13                 i++;
14             }
15             putchar('\n');
16
17         }
18         else if (code[i] == '/' && code[i + 1] == '*') {
19             // Multi-line comment
20             i += 2;
21             while (!(code[i] == '*' && code[i + 1] == '/')) {
22                 putchar(code[i]);
23                 i++;
24
25             }
26             i += 2;
```

Output:
```
/tmp/Ajdda22f80.o
End code with $$$
Enter the C code
/* Hello I am Akshit Jain
My reg no is 21BRS1088
*/
//Loggin out....
$$$
Comments:
 Hello I am Akshit Jain
My reg no is 21BRS1088
//Loggin out....
```

Output -

```
  Output

/tmp/Ajdda22f80.o
End code with $$$
Enter the C code
/* Hello I am Akshit Jain
My reg no is 21BRS1088
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//Loggin out....
$$$
Comments:
 Hello I am Akshit Jain
My reg no is 21BRS1088
//Loggin out....
```

```
  Output

/tmp/yLiKa2ExXA.o
End code with $$$
Enter the C code
#include <stdio.h>
int a = 5;
int b = 5;
//printing sum of a and b
//expected output 10
int c = a+b;
printf(c);
$$$
Comments:
//printing sum of a and b
//expected output 10
```