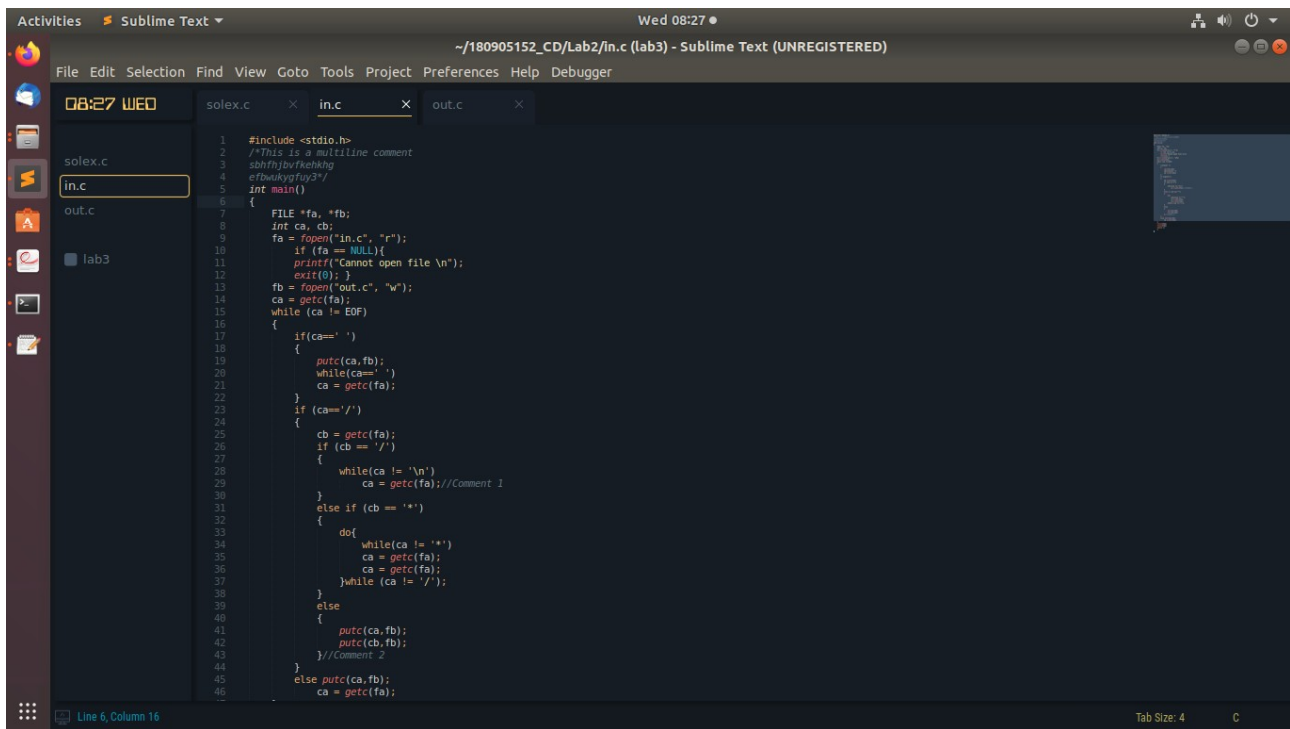


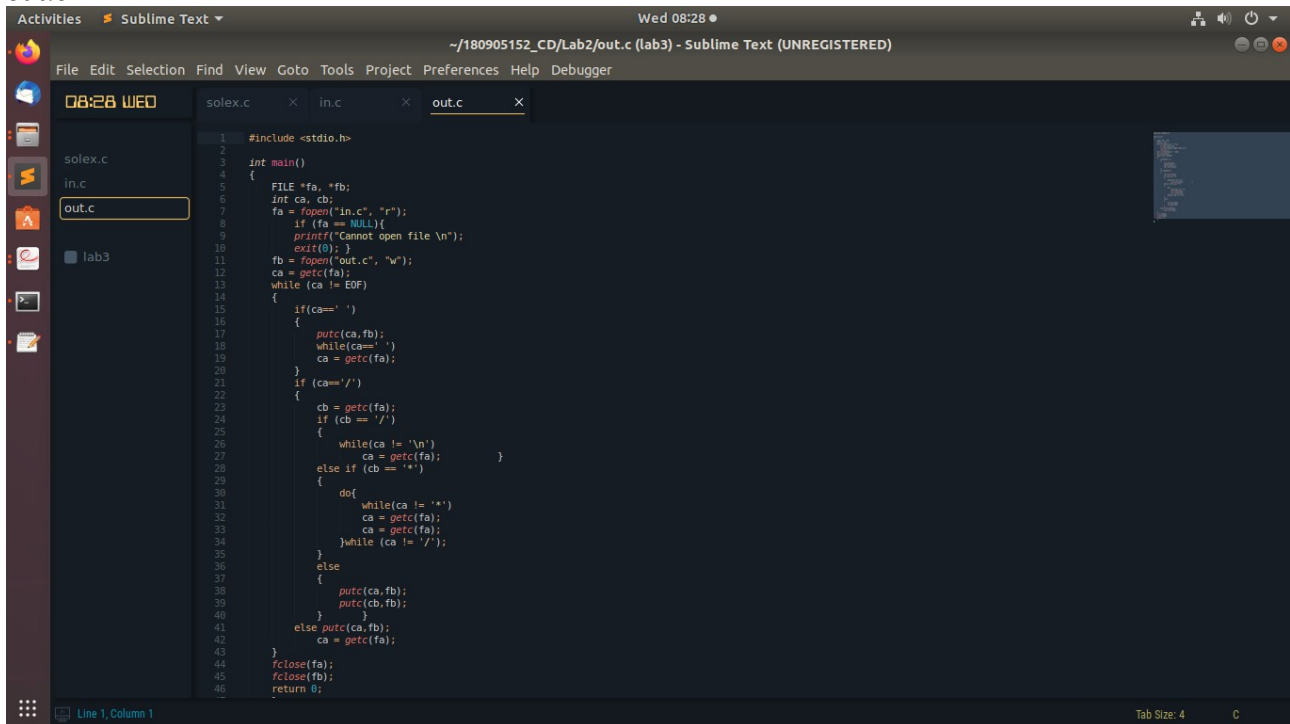
# Lab 2

## Solved Exercise

### in.c



### out.c



## Code

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
```

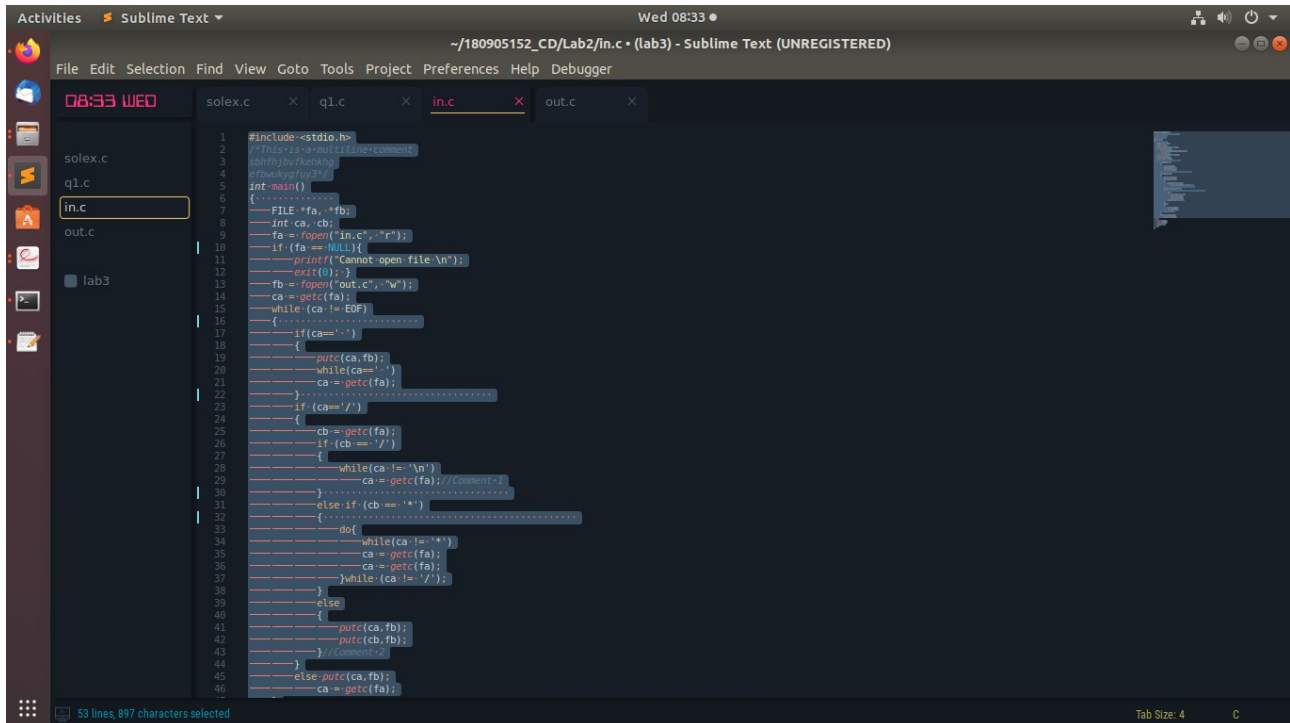
```

FILE *fa, *fb;
int ca, cb;
fa = fopen("in.c", "r");
if (fa == NULL){
    printf("Cannot open file \n");
    exit(0); }
fb = fopen("out.c", "w");
ca = getc(fa);
while (ca != EOF)
{
    if(ca==' ')
    {
        putc(ca,fb);
        while(ca==' ')
            ca = getc(fa);
    }
    if (ca=='/')
    {
        cb = getc(fa);
        if (cb == '/')
        {
            while(ca != '\n')
                ca = getc(fa);
        }
        else if (cb == '*')
        {
            do{
                while(ca != '*')
                    ca = getc(fa);
                ca = getc(fa);
            }while (ca != '/');
        }
        else
        {
            putc(ca,fb);
            putc(cb,fb);
        }
    }
    else
        putc(ca,fb);
    ca = getc(fa);
}
fclose(fa);
fclose(fb);
return 0;
}

```

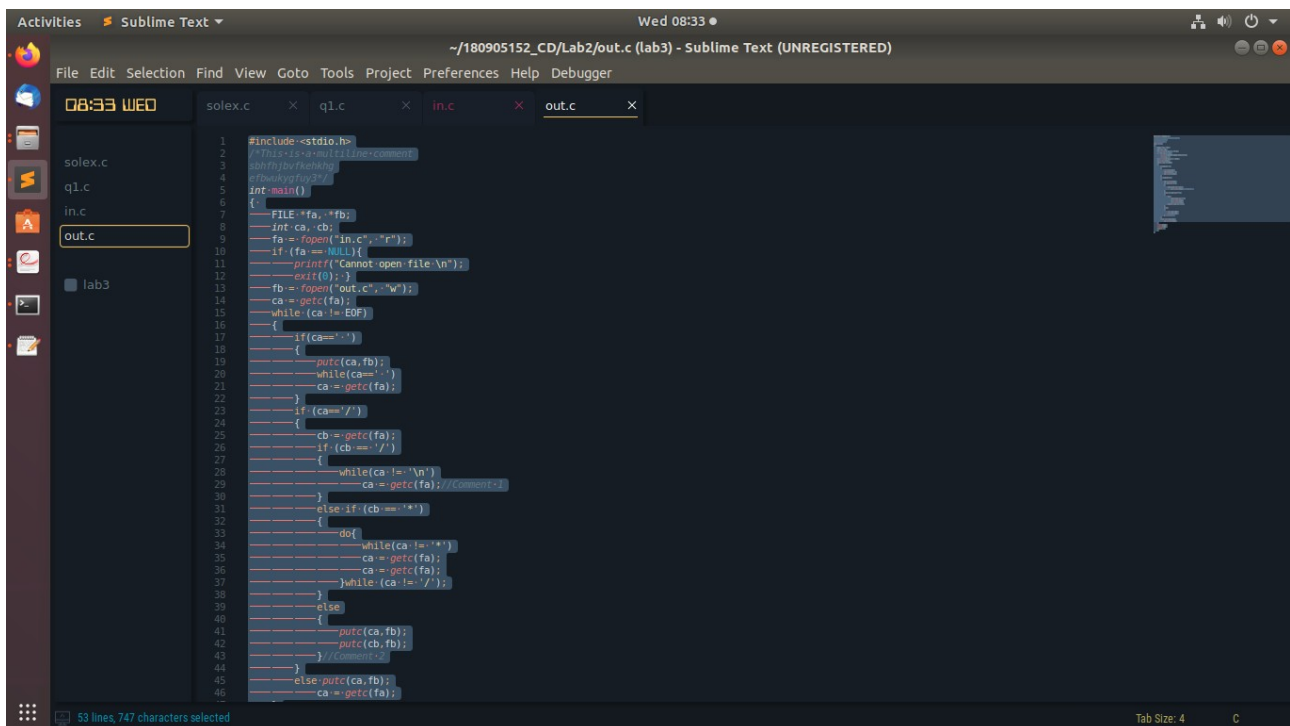
## Q1

### in.c



```
1 #include <stdio.h>
2 /* This is a multi-line comment
3  *
4  * fBaukyg fuy3*/
5 int main()
6 {
7     FILE *fa, *fb;
8     int ca, cb;
9     fa = fopen("in.c", "r");
10    if (fa == NULL) {
11        printf("Cannot open file\n");
12        exit(0);
13    }
14    fb = fopen("out.c", "w");
15    ca = getc(fa);
16    while (ca != EOF)
17    {
18        if (ca == '\n')
19        {
20            putc(ca, fb);
21            while (ca == '\n')
22                ca = getc(fa);
23        }
24        if (ca == '/')
25        {
26            cb = getc(fa);
27            if (cb == '/')
28            {
29                while (ca != '\n')
30                    ca = getc(fa); //Comment-1
31            }
32            else if (cb == '*')
33            {
34                do {
35                    while (ca != '*')
36                        ca = getc(fa);
37                    while (ca != '/')
38                        ca = getc(fa);
39                }
40            }
41            else
42            {
43                putc(ca, fb);
44                putc(cb, fb);
45            } //Comment-2
46        }
47        else
48        {
49            putc(ca, fb);
50            ca = getc(fa);
51        }
52    }
53 }
```

### out.c



```
1 #include <stdio.h>
2 /* This is a multi-line comment
3  *
4  * fBaukyg fuy3*/
5 int main()
6 {
7     FILE *fa, *fb;
8     int ca, cb;
9     fa = fopen("in.c", "r");
10    if (fa == NULL) {
11        printf("Cannot open file\n");
12        exit(0);
13    }
14    fb = fopen("out.c", "w");
15    ca = getc(fa);
16    while (ca != EOF)
17    {
18        if (ca == '\n')
19        {
20            putc(ca, fb);
21            while (ca == '\n')
22                ca = getc(fa);
23        }
24        if (ca == '/')
25        {
26            cb = getc(fa);
27            if (cb == '/')
28            {
29                while (ca != '\n')
30                    ca = getc(fa); //Comment-1
31            }
32            else if (cb == '*')
33            {
34                do {
35                    while (ca != '*')
36                        ca = getc(fa);
37                    while (ca != '/')
38                        ca = getc(fa);
39                }
40            }
41            else
42            {
43                putc(ca, fb);
44                putc(cb, fb);
45            } //Comment-2
46        }
47        else
48        {
49            putc(ca, fb);
50            ca = getc(fa);
51        }
52    }
53 }
```

Code:

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
```

```
    FILE *fa, *fb;
    int ca, cb;
```

```

fa = fopen("in.c", "r");
if (fa == NULL){
    printf("Cannot open file \n");
    exit(0); }
fb = fopen("out.c", "w");
ca = getc(fa);
while (ca != EOF)
{
    if(ca==' ')
    {
        putc(ca,fb);
        while(ca==' ')
            ca = getc(fa);
    }
    if (ca=='\t')
    {
        putc(' ',fb);
    }
    else
        putc(ca,fb);
    ca = getc(fa);
}
fclose(fa);
fclose(fb);
return 0;
}

```

Q2  
*in.c*

The screenshot shows the Sublime Text editor with the following details:

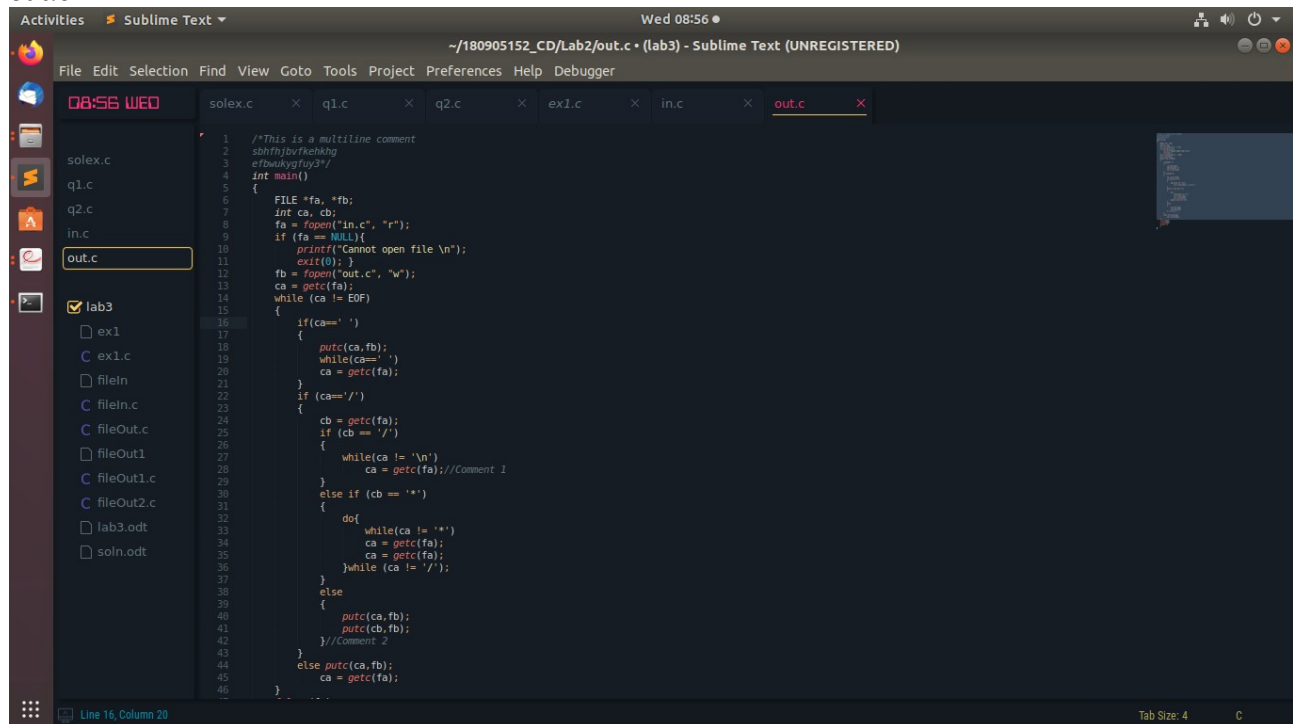
- Window Title:** Wed 08:50 • ~/180905152\_CD/Lab2/in.c (lab3) - Sublime Text (UNREGISTERED)
- Menu Bar:** File, Edit, Selection, Find, View, Goto, Tools, Project, Preferences, Help, Debugger
- Tab Bar:** solex.c, q1.c, q2.c, ex1.c, in.c (active), out.c
- Sidebar (File Explorer):**
  - lab3 (selected)
    - ex1
    - ex1.c
    - fileIn
    - fileIn.c
    - fileOut.c
    - fileOut1
    - fileOut1.c
    - fileOut2.c
    - lab3.odt
    - soln.odt
- Main Editor Area:**

```

1  #include<unistd.h>
2  #include<sys/stat.h>
3  #include<fcntl.h>
4  #include<stdlib.h>
5  #include<stdio.h>
6  #include<string.h>
7
8  #define max 500
9  /*This is a multiline comment
10 subhsjvfrkshkg
11 efbekyfluy3*/
12 int main()
13 {
14     FILE *fa, *fb;
15     int ca, cb;
16     fa = fopen("in.c", "r");
17     if (fa == NULL){
18         printf("Cannot open file \n");
19         exit(0); }
20     fb = fopen("out.c", "w");
21     ca = getc(fa);
22     while (ca != EOF)
23     {
24         if(ca==' ')
25         {
26             putc(ca,fb);
27             while(ca==' ')
28                 ca = getc(fa);
29         }
30         if (ca=='\t')
31         {
32             cb = getc(fa);
33             if (cb == '/')
34             {
35                 while(ca != '\n')
36                     ca = getc(fa); //Comment 1
37             }
38             else if (cb == '*')

```
- Status Bar:** Line 8, Column 16, Saved ~/180905152\_CD/Lab2/in.c (UTF-8) | Tab Size: 4 | C

## out.c



## Code

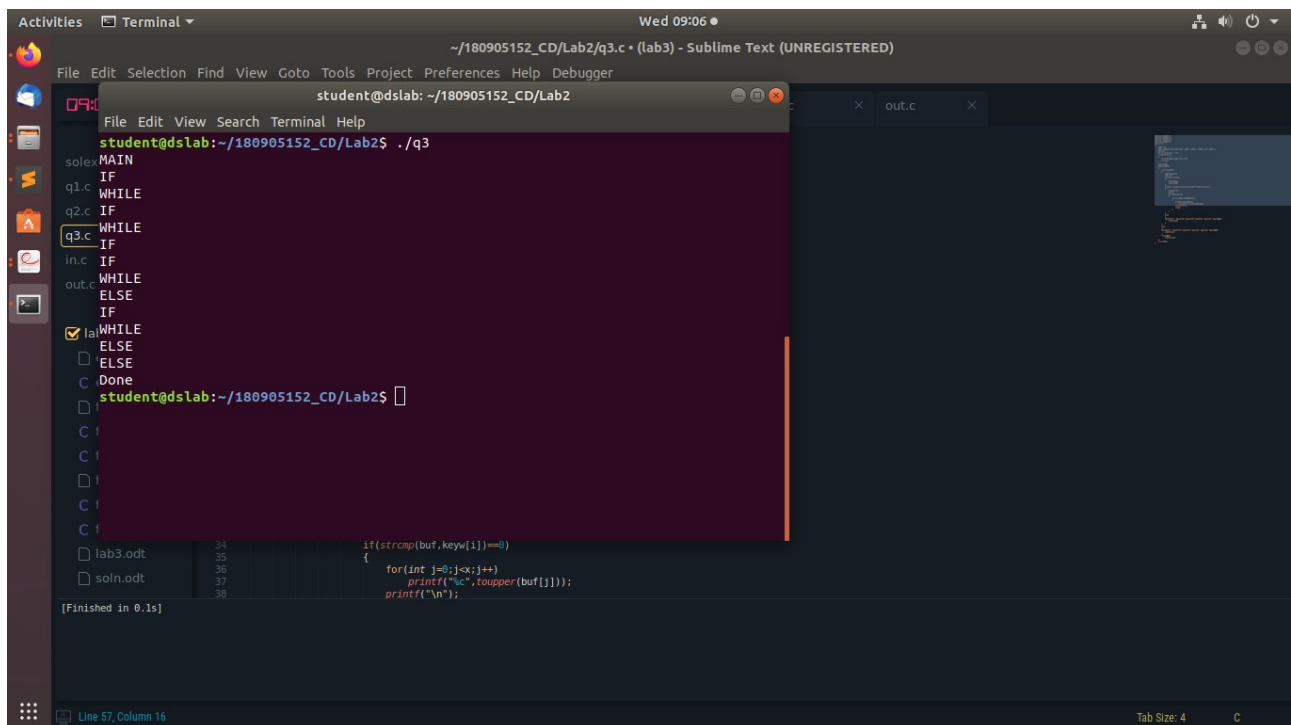
```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
int main()
{
    FILE *fa, *fb;
    int ca, cb;
    char prep[]={"#include", "#define"};
    char buff[100];
    fa = fopen("in.c", "r");
    fb = fopen("out.c", "w");
    if (fa == NULL || fb == NULL){
        printf("Cannot open file \n");
        exit(0); }
    ca = getc(fa);
    while (ca != EOF)
    {
        memset(buff, 0, sizeof(buff));
        if(ca=='#')
        {
            int i=0;
            while(ca!=' ' || ca!='<' || ca!=''){
                buff[i++] = ca;
                ca = getc(fa);
            }
            buff[i] = '\0';
            puts(buff);
            for(int j=0; j<2; j++){
                if(strcmp(buff, prep[j]) == 0)
```

```

        {
            while(ca!='\n')
                ca = getc(fa);
            i=0;
            break;
        }
    }if(i==0)
        continue;
    else
    {
        for(int j=0;j<i;j++)
            putc(buff[j],fb);
    }
}
else
    putc(ca,fb);
ca = getc(fa);
}
fclose(fa);
fclose(fb);
return 0;
}

```

### Q3



### Code

```

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <ctype.h>
int main()

```

```

{
    FILE *fa;
    char c, keyw[100][100]={"void", "main", "while", "break", "if", "else"};
    int n=6;
    fa = fopen("in.c", "r");
    if (fa == NULL)
    {
        printf("Cannot open file \n");
        exit(0);
    }
    c=getc(fa);
    while(c!=EOF)
    {
        if(isalpha(c))
        {
            char buf[100];
            int x=0;
            while(isalpha(c))
            {
                buf[x++]=c;
                c=getc(fa);
            }
            if(c==' '||c=='\t'||c=='\n'||c=='('||c=='{'||c==';')
            {
                buf[x]='\0';
                int i;
                for(i=0;i<n;i++)
                {
                    if(strcmp(buf, keyw[i])==0)
                    {
                        for(int j=0;j<x;j++)
                            printf("%c", toupper(buf[j]));
                        printf("\n");
                        break;
                    }
                }
            }
            else
            {
                while(c!=' ' && c!='\t' && c!='\n' && c!='{' && c!=';' && c!=EOF)
                    c=getc(fa);
            }
        }
        else
        {
            while(c!=' ' && c!='\t' && c!='\n' && c!=';' && c!='{' && c!=EOF)
                c=getc(fa);
        }
        if(c!=EOF)
            c=fgetc(fa);
    }
    fclose(fa); }

```

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***CSE B -25***