

LAB 2

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Lab CD

//Solved Problem

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

int main()
{
    FILE *fa,*fb;

    fa=fopen("solvedInputFile.c","r");
    if(fa==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    fb=fopen("solvedOutputFile.c","w");
    if(fb==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    int ca,cb;

    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=='*')
        {
            ca=getc(fa);
            ca=getc(fa);
            cb=getc(fa);
            while(ca!='*' && cb!='\\')
            {
                ca=getc(fa);
                cb=getc(fa);
            }
        }
        else
            putc(ca,fb);
    }
    else putc(ca,fb);
    ca=getc(fa);

}
fclose(fa);
fclose(fb);

return 0;

}

```

```

1
2
3
4 #include<stdio.h>
5 #include<stdlib.h>
6
7 int main()
8 {
9     //I am sahil Saini
10
11     /*Hi sajdkasj
12     sajdsajk dsjkkdsk
13     sjdsjkk*/
14
15     int a,b;
16     a=2+3;
17     b=a+3;
18
19     return 0;
20 }
21

```

```

1
2
3
4 #include<stdio.h>
5 #include<stdlib.h>
6
7 int main()
8 {
9
10
11     int a,b;
12     a=2+3;
13     b=a+3;
14
15     return 0;
16 }
17
18

```

Q1

```

#include <stdio.h>
#include<stdlib.h>

```

```

int main()
{
    FILE *fa,*fb;

    fa=fopen("prog1InputFile.c","r");
    if(fa==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    fb=fopen("prog1OutputFile.c","w");
    if(fb==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    int ca,cb;

    ca=getc(fa);

    while(ca!=EOF)
    {
        if(ca==' ')
        {
            putc(ca,fb);
            while(ca==' ' || ca=='\t')
                ca=getc(fa);
        }
        if(ca=='\t')
        {
            putc(ca,fb);
            while(ca==' ' || ca=='\t')
                ca=getc(fa);
        }
        putc(ca,fb);
        ca=getc(fa);
    }
    fclose(fa);
    fclose(fb);

    return 0;
}

```

```
1
2
3
4
5
6 #include<stdio.h>
7 #include<stdlib.h>
8
9 int main()
10 {
11     //I am sahil Saini
12
13     /*Hi sajdkasj
14     sajdsajk dsjkkdsk
15     sjdsjkk*/
16
17     int a,b;
18     a=2+3 ;
19     b=a+ 3;
20
21     return 0;
22 }
23
24
```

Q2

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

```
int main()
{
    FILE *fa,*fb;

    fa=fopen("prog2InputFile.c","r");
    if(fa==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    fb=fopen("prog2OutputFile.c","w");
    if(fb==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    int ca,cb;

    int k=0;

    ca=getc(fa);
    while(ca!=EOF)
    {
        char buff[100];
```

```

        k=0;
        if(ca=='#')
        {
            buff[k++]=ca;
            ca=getc(fa);
            while(ca!=' ' && ca!='\n')
            {
                buff[k++]=ca;
                ca=getc(fa);
            }
            buff[k++]=ca;
            buff[k++]='\0';
            if((strstr(buff,"#include")==NULL && strstr(buff,"#define")==NULL))
            {
                for (int i=0;i<strlen(buff);i++)
                {
                    putc(buff[i],fb);
                }
            }
        }
        else
            putc(ca,fb);

        ca=getc(fa);

    }
    fclose(fa);
    fclose(fb);

    return 0;

}

```

The screenshot shows a code editor with two tabs: 'prog2.c' and 'prog2OutputFile.c'. The 'prog2.c' tab contains the following code:

```

1 #include<stdio.h>
2 #include<stdlib.h>
3 #sdjas
4 #sdh
5 #27
6
7 int main()
8 {
9     //I am sahil Saini
10
11     /*Hi sajdkasj
12     sajdsajk dsjkkdsk
13     sjdsjkk*/
14
15     int a,b;
16     a=2+3;
17     b=a+3;
18
19     return 0;
20 }
21

```

The 'prog2OutputFile.c' tab contains the following code:

```

1 #sdjas
2 #sdh
3 #27
4
5 int main()
6 {
7     //I am sahil Saini
8
9     /*Hi sajdkasj
10     sajdsajk dsjkkdsk
11     sjdsjkk*/
12
13     int a,b;
14     a=2+3;
15     b=a+3;
16
17     return 0;
18 }
19

```

Below the code editor, a terminal window shows the following commands and output:

```

student@lplab-Lenovo-Product: ~/Desktop/Sahil_180905048/lab2
student@lplab-Lenovo-Product:~/Desktop/Sahil_180905048/lab2$ gcc prog2.c -o prog2.out
student@lplab-Lenovo-Product:~/Desktop/Sahil_180905048/lab2$ ./prog2.out
student@lplab-Lenovo-Product:~/Desktop/Sahil_180905048/lab2$

```

Q3

```
#include <stdio.h>
#include<stdlib.h>
#include<string.h>
#include <ctype.h>
```

```
char keyword_arr[32][10]=
{
    "auto", "break", "case",    "char",
    "const",    "continue",    "default",    "do",
    "double",    "else", "enum",    "extern",
    "float", "for", "goto", "if",
    "int", "long", "register",    "return",
    "short",    "signed",    "sizeof",    "static",
    "struct",    "switch",    "typedef",    "union",
    "unsigned",    "void", "volatile",    "while"
};
```

```
int main()
{
    FILE *fa,*fb;

    fa=fopen("prog3InputFile.c","r");
    if(fa==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    fb=fopen("prog3OutputFile.c","w");
    if(fb==NULL)
    {
        printf("Cannot open the file\n");
        exit(0);
    }

    int ca,cb;
    char str[100];

    ca=getc(fa);

    while(ca!=EOF)
    {
        int k=0;
        while(isalpha(ca))
        {
            str[k++]=ca;
            ca=getc(fa);
        }
    }
```

```

str[k++]='\0';
// printf("%s\n",str );

int flag=0;
for(int j=0;j<32;j++)
{
    if(strcmp(str,keyword_arr[j])==0)
    {
        for(int i=0; str[i]!='\0'; i++)
        {
            if(str[i]>='a' && str[i]<='z')
            {
                str[i] = str[i] - 32;
            }
            flag=1;
        }
        if (flag==1)
            printf("%s\n",str );
    }
}
ca=getc(fa);

}
fclose(fa);
fclose(fb);

return 0;

```

The screenshot shows a code editor on the left and a terminal window on the right. The code editor displays a C program with the following content:

```

1
2
3
4 #include<stdio.h>
5 #include<stdlib.h>
6
7 int main()
8 {
9     //I am sahil Saini
10
11     /*Hi sajdkasj
12     sajdask dsjkkdk
13     sjsjkk*/
14
15     int a,b;
16     a=2+3;
17     b=a+3;
18
19     if(a==b)
20     printf("I am Sahil");
21     else printf("I am Saini");
22
23     return 0;
24 }
25

```

The terminal window on the right shows the compilation and execution of the program:

```

student@lplab-Lenovo-Product:~/Desktop/Sahil_180905048/lab2$ gcc prog3.c -o prog3.out
student@lplab-Lenovo-Product:~/Desktop/Sahil_180905048/lab2$ ./prog3.out
I am Saini

```

}
 ////////////////////////////////////END////////////////////////////////////