

ASSIGNMENT #1: A C source program with single and multiple line comments is given. As the first step toward compilation you need to remove the comments and white space (extra spaces, tabs and newline characters). Develop a program that takes as input file the given source program and produces a filtered file as stated above. The program must also display both the files.

Solve :

```
#include<stdio.h>

char c;
char space = ' ';
FILE *p1,*p2;
void CommentRemove()

{
    c=fgetc(p1);
    if(c=='/')

    {
        while(c=fgetc(p1))
        {
            if(c=='\n')break;
        }
    }
    else if(c=='*')
    {
        while(c=fgetc(p1))
        {
            if(c=='/')break;
        }
    }
}
```

```

int main()
{
    p1 = fopen("input.c", "r");
    p2 = fopen("output.txt", "w");
    if(!p1)printf("File cannot be opened!\n");
    else
    {
        while((c=fgetc(p1))!=EOF)
        {
            if(c=='/')CommentRemove();
            else if(c==' ' | c=='\n' | c=='\t')
            {
                while(c=fgetc(p1))
                {
                    if(c!=' '&&c!='\n'&&c!='\t')
                    {
                        if(c=='/')CommentRemove();
                        else
                        {
                            fputc(space,p2);
                            fputc(c,p2);
                        }
                        break;
                    }
                }
            }
            else fputc(c,p2);
        }
    }
    fclose(p1);
    fclose(p2);
    p1 = fopen("input.c", "r");
    p2 = fopen("output.txt", "r");

    printf("\n\n----- Input File ----- \n\n");
    while((c=fgetc(p1))!=EOF)printf("%c",c);
    printf("\n\n----- Output File ----- \n\n");
    while((c=fgetc(p2))!=EOF)printf("%c",c);
    printf("\n");
}

```

Input :

```
#include/*hello*/<stdio.h>
```

```
int main()  
{
```

```
    //hey
```

```
    printf ("hello world\n");
```

```
    /*sadness*/
```

```
    /*happy*/
```

```
}
```

```
/*
```

```
sadness
```

```
*/
```

```
//
```

```
//
```

Output :

```
#include<stdio.h> int main() { printf ("hello world\n"); }
```