```c
//Assignment1
#include <stdio.h>
int main()
{
    FILE *p1,*p2;
    char c;
    char *in = "input.c";
    char *out1 = "output1.txt";
    char *out2 = "output2.txt";
    char *out3 = "output3.txt";
    char *out4 = "output4.txt";

    //Remove single line comment
    p1 = fopen(in, "r");
    p2 = fopen(out1,"w");
    if(!p1) printf("\nFile can't be opened!");
    else
    {
        while((c = fgetc(p1)) != EOF)
        {
            if (c == '/')
            {
                c = fgetc(p1);
                if(c == '/') while(c!='\n') c = fgetc(p1);
                else
                {
                    fputc('/', p2);
                    fputc(c, p2);
                }
            }
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        else fputc(c, p2);
    }
}
fclose(p1);
fclose(p2);


//Remove multiple comment
p1 = fopen(out1, "r");
p2 = fopen(out2,"w");
if(!p1) printf("\nFile can't be opened!");
else
{
    while((c = fgetc(p1)) != EOF)
    {
        if (c == '/')
        {
            c = fgetc(p1);
            if(c == '*')
            {
                do {
                    c = fgetc(p1);
                }while(c != '*');
                c = fgetc(p1);
            }
            else
            {
                fputc('/', p2);
                fputc(c, p2);
            }
        }
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        else fputc(c, p2);
    }
}
fclose(p1);
fclose(p2);


//Remove white space
p1 = fopen(out2, "r");
p2 = fopen(out3,"w");
if(!p1) printf("\nFile can't be opened!");
else
{
    while((c = fgetc(p1)) != EOF)
    {
        if (c == ' ')
        {
            while(c == ' ') c = fgetc(p1);
            fputc(' ', p2);
            fputc(c, p2);
        }
        else fputc(c, p2);
    }
}
fclose(p1);
fclose(p2);


//Replace newline with single white space
p1 = fopen(out3, "r");
p2 = fopen(out4,"w");
if(!p1) printf("\nFile can't be opened!");
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    else
    {
        while((c = fgetc(p1)) != EOF)
        {
            if (c == '\n') fputc(' ', p2);
            else fputc(c, p2);
        }
    }
    fclose(p1);
    fclose(p2);


    //Final Output
    p1 = fopen(out4,"r");
    while((c=fgetc(p1))!=EOF) printf("%c",c);
    fclose(p1);


    return 0;
}
```

```c
//1.Write a program to print the header files used in a source program.
#include<bits/stdc++.h>
using namespace std;
int main()
{
    FILE *p1, *p2;char c;
   p1 = fopen("input.c", "r");
   p2 = fopen("output.txt", "w");
  if(!p1)printf("File can't be found");
   else
   {
      while((c = fgetc(p1)) != EOF)
      {
         if(c == '<')
         {
            while(c != '>')
            {
               c = fgetc(p1);
               if(c != '>') fputc(c, p2);
            }
            fputc('\n',p2);
         }
      }
   }
   fclose(p1); fclose(p2);
   p2 = fopen("output.txt", "r");
   while((c=fgetc(p2)) != EOF) cout << c;
   fclose(p2);
   return 0;
}
```

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//2.Write a program to add line numbers to a source program.
#include<stdio.h>
int main()
{
    FILE *p1, *p2; char c;
    int line_no=1;
    p1 = fopen("input.c", "r");
    p2 = fopen("output.txt", "w");
    printf("%d:",line_no);
    fprintf(p2,"%d:",line_no);
    if(!p1)printf("File can't be found");
    else
    {
        while((c = fgetc(p1)) != EOF)
        {
            printf("%c", c);
            fputc(c, p2);
            if(c == '\n')
            {
                line_no++;
                printf("%d:",line_no);
                fprintf(p2,"%d:",line_no);
            }
        }
    }
    fclose(p1);
    fclose(p2);

    return 0;
}
```