MACRO PREPROCESSOR

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S7 CSE B

RollNo18

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

void main()
{
        int fo=0,fi=0,i;
        char pre[20],name[20],val[20];
        FILE *f1,*f2,*f3;
        f1=fopen("input.txt","r");
        f2=fopen("intermediate.txt","w+");
        f3=fopen("output.txt","w+");
        fscanf(f1,"%s ",pre);
        while(!feof(f1)) {
                if(!strcmp(pre,"#define")) {
                        fscanf(f1,"%s %s\n",name,val);
                        fprintf(f2,"%s\t%s\n",name,val);
                }
                fscanf(f1,"%s",pre);
        }
        rewind(f1);
        fscanf(f1,"%s ",pre);
        while(!feof(f1)) {
                fscanf(f1,"%s ",pre);
                if(!strcmp(pre,"#define"))
                {
                        fscanf(f1,"%s ",pre);
                        fscanf(f1,"%s ",pre);
                        continue;
                }
                if(!strcmp(pre,"#include<stdio.h>"))
                        continue;
                rewind(f2);
                while(!feof(f2))
                {
                        fscanf(f2,"%s\t%s\n",name,val);
                        if(!strcmp(pre,name))
                        {
                                fo=1;
                                break;
                        }
                }
                if(fo==1)
                {
                        fo=0;
                        if(val[0]=='{')
                        {
                                for(i=1;val[i]!='}';i++)
                                        val[i-1]=val[i];
                                val[i-1]='\0';
                        }
                        fprintf(f3,"%s ",val);
```

```
                    }
                    else
                            fprintf(f3,"%s ",pre);
                    if(!strcmp(pre,"()"))
                            fi=1;
                    if(!strcmp(pre,";"))
                            fi=1;
                    if(!strcmp(pre,"{"))
                            fi=1;
                    if(!strcmp(pre,"}"))
                            fi=1;
                    if(fi==1)
                    {
                            fi=0;
                            fprintf(f3,"\n");
                    }

            }
        fclose(f1);
        fclose(f2);
        fclose(f3);
}
```

INPUT.TXT
****
```
#include<stdio.h>
#define pi 3.14
#define sum() {c=a+b}
void main ()
{
sum() ;
int a, b, c, area ;
area = c + pi ;
sum() ;
}
```

INTERMEDIATE.TXT
****
```
pi      3.14
sum()   {c=a+b}
```

OUTPUT.TXT
****
```
void main ()
{
c=a+b ;
int a, b, c, area ;
area = c + 3.14 ;
c=a+b ;
}
```