

系統程式設計

Lab5 Stdio Compare

學號:408410035

姓名:鄭宇辰

1. Where is the counter you add?

5.4:Line15

```
1  #include<stdio.h>
2  #include <sys/types.h>
3  #include <sys/stat.h>
4  #include <fcntl.h>
5  #include "apue.h"
6
7  int main(void)
8  {
9
10     int c;
11     int counter=0;
12     FILE *fp=fopen("100mb_files","r");
13     while( (c = getc(fp)) != EOF )
14     {
15         counter++;
16         if(putc(c,stdout) == EOF)
17             err_sys("output error");
18     }
19     printf("counter=%d\n",counter);
20     //if(ferror(stdin))
21     //  err_sys("input error");
22
23     exit(0);
24 }
```

5.5:Line12

```
#include "apue.h"
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>
int main(void)
{
    char buf[MAXLINE];
    int counter=0;
    FILE *fp=fopen("100mb_files","r");
    while( (fgets(buf,MAXLINE,fp)) != NULL )
    {
        counter++;
        if(fputs(buf,stdout) == EOF)
            err_sys("output error");
    }
    printf("counter=%d\n",counter);
    //if(ferror(stdin))
    //    err_sys("input error");

    exit(0);
}
```

2. Screen shot for Table1

5.4:putc&getc

```
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$ gcc fgs_4.c error.c
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$ time ./a.out
counter=104857600

real    0m4.949s
user    0m1.164s
sys     0m0.936s
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$
```

5.5:fgets&fputs

```
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$ gcc fig5_5.c error.c
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$ time ./a.out
counter=25607

real    0m0.040s
user    0m0.012s
sys     0m0.025s
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$
```

3. Screen shot for Table2

full buffer:

```
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$ time ./a.out
counter=25607

real    0m0.033s
user    0m0.000s
sys     0m0.033s
```

Line buffer:

```
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$ time ./a.out
counter=25607

real    0m0.031s
user    0m0.000s
sys     0m0.030s
```

Unbuffer:

```
hsa1155@TKwaterHeater-VirtualBox:~/sp/lab5$ time ./a.out
counter=25607

real    0m27.580s
user    0m5.345s
sys     0m22.227s
```