系統程式設計

Lab5 Stdio Compare

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1. Where is the counter you add?

   (請註明在程式碼的第幾行，最好加上截圖)

   1. fig5_4

      cnt 在第 6 行宣告，在第 11 行時執行 cnt++。

```
6        int c,cnt=0;
7        FILE* target = fopen ("100mb_file","r");
8        while( (c = getc(target)) != EOF ) {
9            if(putc(c,stdout) == EOF)
10               err_sys("output error");
11           cnt++;
12       }
```

   2. fig5_5

      cnt 在第 6 行宣告，在第 11 行時執行 cnt++。

```
6        int cnt = 0 ;
7        FILE* fp = fopen ("100mb_file","r");
8        while( (fgets(buf,MAXLINE,fp)) != NULL ) {
9            if(fputs(buf,stdout) == EOF)
10               err_sys("output error");
11           cnt++;
12       }
```

2. Screen shot for Table1

   (提供每個執行後的截圖，並說明每張截圖是屬於哪種

function)

```
owen@LAPTOP-65HPDS2:/mnt/c/Users/Admin/Desktop/Lab5_example$ time ./exe_fig5_4
Loop Iterations : 104857600

real    1m51.398s
user    0m3.378s
sys     0m17.142s
```

```
owen@LAPTOP-65HPDS2:/mnt/c/Users/Admin/Desktop/Lab5_example$ time ./exe_fig5_5
Loop Iterations : 25607

real    1m26.047s
user    0m0.801s
sys     0m9.689s
```

3. Screen shot for Table2

(提供每個執行後的截圖，並說明每張截圖是屬於哪種 mode)

說明：

輸入格式: time ./exe_fig5_5 mode
(mode : 1 Fully_buffered, 2 Line_buffered, 3 unbuffered)

截圖：

1. Fully_buffered

```
owen@LAPTOP-65HPDS2:/mnt/c/Users/Admin/Desktop/Lab5_example$ time ./exe_fig5_5 1

real    0m2.224s
user    0m0.097s
sys     0m0.289s
```

2. Line_buffered

```
owen@LAPTOP-65HPDS2:/mnt/c/Users/Admin/Desktop/Lab5_example$ time ./exe_fig5_5 2

real    0m2.835s
user    0m0.097s
sys     0m0.822s
```

3. unbuffered

```
owen@LAPTOP-65HPDS2:/mnt/c/Users/Admin/Desktop/Lab5_example$ time ./exe_fig5_5 3

real    527m44.440s
user    4m33.940s
sys     83m26.482s
```