

Re: adding colums to text

Source: http://coding.derkeiler.com/Archive/C_CPP/comp.lang.c/2008-06/msg03698.html

- *From:* pete <pfiland@xxxxxxxxxxxxxxxx>
 - *Date:* Sun, 29 Jun 2008 07:50:55 -0400
-

Barry Schwarz wrote:

On Sat, 28 Jun 2008 23:11:13 -0400, pete <pfiland@xxxxxxxxxxxxxxxx> wrote:

Bill Cunningham wrote:

I have a row of values like such, placed in a text file by fprintf.

10.50
10.25
10.00
10.75
11.00

What I want to do to the above colum is add a new column right beside it which is a total of these values and then average them in another column. For example.

11.00 52.50

In another column is the average of the 5.

11.00 52.50 10.50

I am assuming that fprintf is going to have to be used and maybe freopen.

Text files and linked lists, go together like hot dogs and mustard.

```
/* BEGIN new.c output */
```

File is open for writing.

File lines:

10.50
10.25
10.00

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10.75
11.00
File is closed.

File is open for reading.
Reading file into a linked list...
File is closed.

snip code

Why on earth would you needlessly complicate such a simple task with linked lists, especially given BC's previous posting history?

I posted that, because that's really how I would do it.
The first two things that popped into my head were "linked list" and "extra temp file".
My preference is to always minimize the number of open files.

```
/* BEGIN new.c output */
```

```
File is open for writing.  
File is closed.  
File is open for reading.  
File lines:  
10.50  
10.25  
10.00  
10.75  
11.00  
File is rewind.
```

```
Calculating sum and average.  
sum is 52.500000. average is 5.250000  
File is rewind.
```

```
Temp file is open for writing.  
Reading file into a temp file...  
File is closed.  
Temp file is closed.
```

```
Temp file is open for reading.  
File is open for writing.  
File is closed.  
Temp file is closed.  
Temp file is removed.
```

```
File is open for reading.  
File lines:
```

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```
11.00 52.50 5.25
11.00 52.50 5.25
11.00 52.50 5.25
11.00 52.50 5.25
11.00 52.50 5.25
File is closed.
File is removed.
```

```
/* END new.c output */
```

```
/* BEGIN new.c */
```

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <limits.h>
```

```
#define DOUBLES {10.5, 10.25, 10, 10.75, 11}
#define NMEMB(A) (sizeof (A) / sizeof *(A))
```

```
int main(void)
{
int rc;
FILE *fp;
FILE *fp_extra_temp;
double temp_double;
double average;
long unsigned count = 0;
double sum = 0.0;
char fn[L_tmpnam];
char fn_extra_temp[L_tmpnam];
double array[] = DOUBLES;
```

```
puts("/* BEGIN new.c output *\n");
tmpnam(fn);
tmpnam(fn_extra_temp);
fp = fopen(fn, "w");
if (fp == NULL) {
fputs("fopen(fn, \"w\") == NULL\n", stderr);
exit(EXIT_FAILURE);
}
puts("File is open for writing.");
for (count = 0; count != NMEMB(array); ++count) {
fprintf( fp, "%.2f\n", array[count]);
}
fclose(fp);
puts("File is closed.");
fp = fopen(fn, "r");
if (fp == NULL) {
```

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```
fputs("fopen(fn, \"r\") == NULL\n", stderr);
exit(EXIT_FAILURE);
}
puts("File is open for reading.");
puts("File lines:");
while ((rc = getc(fp)) != EOF) {
    putchar(rc);
}
rewind(fp);
puts("File is rewound.\n");
puts("Calculating sum and average.");
while (fscanf(fp, "%lf", &temp_double) == 1) {
    sum += temp_double;
    ++count;
}
average = sum / count;
printf("sum is %f. average is %f\n", sum, average);
rewind(fp);
puts("File is rewound.\n");
fp_extra_temp = fopen(fn_extra_temp, "w");
if (fp_extra_temp == NULL) {
    fputs("fopen(fn_extra_temp), \"w\" == NULL\n", stderr);
    exit(EXIT_FAILURE);
}
puts("Temp file is open for writing.");
puts("Reading file into a temp file...");
while ((rc = getc(fp)) != EOF) {
    putc(rc, fp_extra_temp);
}
fclose(fp);
puts("File is closed.");
fclose(fp_extra_temp);
puts("Temp file is closed.");
fp_extra_temp = fopen(fn_extra_temp, "r");
if (fp_extra_temp == NULL) {
    fputs("fopen(fn_extra_temp, \"r\") == NULL\n", stderr);
    exit(EXIT_FAILURE);
}
puts("\nTemp file is open for reading.");
fp = fopen(fn, "w");
if (fp == NULL) {
    fputs("fopen(fn), \"w\" == NULL\n", stderr);
    exit(EXIT_FAILURE);
}
puts("File is open for writing.");
while (fscanf(fp_extra_temp, "%f", &temp_double) != EOF) {
    fprintf(fp, "%.2f %.2f %.2f\n", temp_double, sum, average);
}
fclose(fp);
puts("File is closed.");
fclose(fp_extra_temp);
```

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```
puts("Temp file is closed.");
remove(fn_extra_temp);
puts("Temp file is removed.");
fp = fopen(fn, "r");
if (fp == NULL) {
fputs("fopen(fn, \"r\") == NULL\n", stderr);
exit(EXIT_FAILURE);
}
puts("\nFile is open for reading.");
puts("File lines:");
while ((rc = getc(fp)) != EOF) {
putchar(rc);
}
fclose(fp);
puts("File is closed.");
remove(fn);
puts("File is removed.");
puts("\n/* END new.c output */");
return 0;
}

/* END new.c */
```

—
pete
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