CIS 141

# COVER PAGE

INTRODUCTION TO PROGRAMMING

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UNIT 4 EXERCISE



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# NARRATIVE

This assignment was a breeze to work on. The only trouble that I had was I started writing this using foreach loops on exploded arrays, since that’s what I am used to having to do to process csv files. But the logic was basically the same so switching to a while loop took less than 5 minutes.

This was a nice refresher on fscanf though, which is not a function that I use often. I will probably find ways to incorporate this into projects in the future if I can. Most likely just using a c++ variant.

# DEFINING DIAGRAM

|  |  |  |
| --- | --- | --- |
| **INPUT** | **PROCESS** | **OUTPUT** |
| Item\_id | open input file read | summary.txt |
| Item\_name | open output file write |  |
| Last\_years | Write title |  |
| This\_year | Write headers |  |
|  | Read line |  |
|  | Calc sales\_diff |  |
|  | Calc message |  |
|  | Add to lines |  |
|  | Write detail line |  |
|  | Repeat until EOF |  |
|  | Write lines number |  |
|  | Print lines number |  |
|  | Close files |  |

# HIERARCHY CHART

(not required until unit 6 or 7)

NASSI-SCHNEIDERMAN

OPEN IN FILE

OPEN OUT FILE

WRITE TITLE TO OUT FILE

WRITE HEADER TO OUT FILE

READ FIRST RECORD

CALC SALES DIFF

WHILE NOT END OF FILE

IF SALES DIFF > 0

T F

GOOD MESSAGE IF SALES DIFF < 0

T F

MSG BAD MSG OK

PRINT DETAIL LINES

READ NEXT LINE

CLOSE FILES

PRINT RECORDS PROCESSED TO CMD LINE

Increment RECORD COUNT

WRITE RECORDS PROCESSED TO FILE

# PROGRAM OUTPUT

A picture containing text, screenshot

Description automatically generated

# SOURCE CODE

<?php $input\_file = fopen("./inv.txt", "r") or die("Unable to read input file\n"); $output\_file = fopen("./summary.txt", "w") or die("Unable to open summary file for writing\n"); fprintf($output\_file, "\n%30s\r\n", "SALES REPORT"); $format = "%-12s%-14s%15s%25s\r\n"; fprintf($output\_file, $format, "ITEM ID", "ITEM NAME", "SALES DIFF", "MESSAGE"); $item\_id = ""; $item\_name = ""; $last\_years = 0; $this\_years = 0; $message = ""; $lines = 0; fscanf($input\_file, "%s %s %d %d", $item\_id, $item\_name, $last\_years, $this\_years); while( !feof($input\_file) ) { $sales\_diff = $last\_years - $this\_years; if($sales\_diff > 0 ) { $message = "HUMAN DID GOOD"; } else if( $sales\_diff < 0 ) { $message = "HUMAN DID BAD"; } else { $message = "HUMAN DID OKAY"; } $lines += 1; fprintf($output\_file, $format, $item\_id, $item\_name, $sales\_diff, $message); fscanf($input\_file, "%s %s %d %d", $item\_id, $item\_name, $last\_years, $this\_years); } fprintf($output\_file, "\nPROCESSED %d RECORDS\n\n", $lines); printf("\nPROCESSED %d RECORDS\n\n", $lines); fclose($input\_file); fclose($output\_file); ?>



# DESK CHECK

INCOMING DATA:

W111 widget 20 25

D222 DoDad 34 30

T333 Thingy 10 10

S444 Something 45 44

EOF

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| LINE # | ITEM ID | ITEM NAME | LAST\_YEAR | THIS\_YEAR | MESSAGE | LINES | SALES\_DIFF |
| 11 | “” |  |  |  |  |  |  |
| 12 |  | “” |  |  |  |  |  |
| 13 |  |  | 0 |  |  |  |  |
| 14 |  |  |  | 0 |  |  |  |
| 15 |  |  |  |  | “” |  |  |
| 16 |  |  |  |  |  | 0 |  |
| 17 | W111 | Widget | 20 | 25 |  |  |  |
| 19 |  |  |  |  |  |  | -5 |
| 24 |  |  |  |  | “HUMAN DID OKAY” |  |  |
| 28 |  |  |  |  |  | 1 |  |
| 30 | D222 | DoDad | 34 | 30 |  |  |  |
| 19 |  |  |  |  |  |  | 4 |
| 22 |  |  |  |  | “HUMAN DID GOOD” |  |  |
| 28 |  |  |  |  |  | 2 |  |
| 30 | T333 | Thingy | 10 | 10 |  |  |  |
| 19 |  |  |  |  |  |  | 0 |
| 26 |  |  |  |  | “HUMAN DID OKAY” |  |  |
| 28 |  |  |  |  |  | 3 |  |
| 30 | S444 | Something | 45 | 44 |  |  |  |
| 19 |  |  |  |  |  |  | 1 |
| 26 |  |  |  |  | “HUMAN DID OKAY” |  |  |
| 28 |  |  |  |  |  | 4 |  |
| 30 | EOF | EOF | EOF | EOF |  |  |  |

Output file: summary.txt

6 SALES REPORT

9 ITEM ID ITEM NAME SALES DIFF MESSAGE

29 W111 widget -5 HUMAN DID BAD

29 D222 DoDad 4 HUMAN DID GOOD

29 T333 Thingy 0 HUMAN DID OKAY

29 S444 Something 1 HUMAN DID GOOD

32 PROCESSED 4 RECORDS

CONSOLE OUT:

33 PROCESS 4 RECORDS

LOGIC:

18 while( !feof($input\_file)) false

21 -5 > 0 false

22 -5 < 0 true

18 EOF false

21 4 > 0 true

18 EOF false

21 0 > 0 false

23 0 < 0 false

26 0 == 0 true

18 EOF false

21 1 > 0 true

18 EOF TRUE