

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

College of Business Administration

MIS 211 - Information Systems II

H2 - C++ Programming: Functions

Points: 25

Due Date: Wednesday, February 27

The objective of this assignment is to introduce you to arithmetic operations and functions. It involves expanding upon your program from H1.

Include a function that calculates the percent change. The single function will be used for the department's and report's revenue and expenses percent changes. Hence, it will be called from four locations (in your program). The percent change is computed as follows:

$$\text{Percent change} = \left(\frac{\text{current} - \text{previous}}{\text{previous}} \times 100 \right) \% .05$$

Round the decimal to the tenths place (i.e., one decimal position) as shown in the calculation.

Note. If the change is negative, subtract .05 from (or add -.05 to) the product.

For the function to perform the proper calculation, it must receive two arguments, the previous and current year's amounts. Upon completing its task, the function will return a value, the percent.

Note. When the previous year's revenue or expense is zero, assign a zero to the percent change.

Accumulate the revenues and expenses for each column; these will appear at the end of the report (i.e., report totals). Call the function to perform the percent change calculation (see sample report on pages 3 and 4).

Report (Output)

Create a report similar to that shown on pages 3 and 4. Aesthetically arrange the column to fit within 80 columns (i.e., non-proportional font character positions) on an 8½ x 11-inch page. Print a page heading on at least the first page (if not on every page).



Note. The best way to print the report is to create a DOS window¹, and open the file with Edit (e.g., edit report.txt). Edit does NOT add margins as Notepad will.

Tangibles

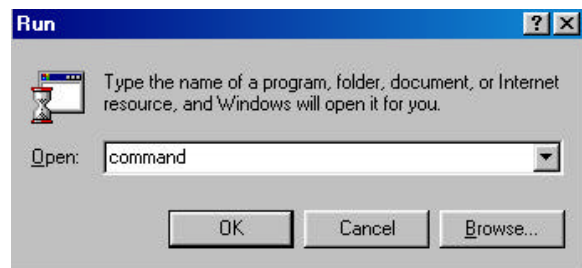
Submit the following items in a 9 x 12-inch manila envelope:

- Hardcopies of both the output (report.txt) and program source listing.
- 3½-inch diskette with your program, data and output files. In Windows Explorer, copy the entire project folder onto your diskette.

Be sure your name appears on the outside of the envelope, diskette and listings.

Note. Please check your diskette for viruses before submitting it. Assignments with infected diskettes cannot be graded.

¹Click on *Start* (lower left corner of the screen) and *Run*. In the dialogue box, enter *command*. Open Edit by typing *edit*. To exit the DOS window, enter *exit*.



STD100 Report

Dept.	Current Revenue	Previous Revenue	Percent Change	Current Expense	Previous Expense	Percent Change
00001	5020000	4900050	2.5	840000	723080	16.2
00003	550350	845310	-34.9	50000	65050	-23.2
00004	750025	650175	15.4	75000	0	0.0
00006	1053025	7500000	-86.0	525000	750000	-30.1
00007	1575010	0	0.0	12000	12000	-0.1
00008	1030024	950125	8.5	58555	60015	-2.5
00009	7507515	6855510	9.6	17530	99555	-82.4
00010	850075	0	0.0	5210	0	0.0
00011	126058	95088	32.6	8500	21100	-59.8
00020	1250030	1150955	8.7	58510	58000	0.9
00022	3575000	3580000	-0.2	107500	118500	-9.3
00024	80065	77500	3.4	7550	8000	-5.7
00026	10058275	9900105	1.6	550075	500010	10.1
00027	1265000	1275000	-0.8	53500	49999	7.1
00028	7501877	4555800	64.7	98507	75000	31.4
00030	812230	800015	1.6	42400	22058	92.3
00034	81175	250015	-67.6	5700	85000	-93.3
00042	10000185	9588500	4.3	200025	100000	100.1
00046	20010030	18501050	8.2	500000	400500	24.9
00049	155000	175000	-11.5	11500	14585	-21.2
00057	8500155	7500118	13.4	255043	299000	-14.8
00064	20016577	20100099	-0.5	8511000	9900101	-14.1
00071	510050	0	0.0	52450	0	0.0
00087	325056	302500	7.5	52010	48088	8.2
00096	234585	208859	12.4	41000	42500	-3.6
00190	2100550	2150000	-2.3	105000	900540	-88.4
00320	250085	200045	25.1	75815	76945	-1.5
11600	785000	615000	27.7	0	0	0.0
18701	1500	905	65.8	0	0	0.0
18706	50155	49950	0.5	105	0	0.0
18722	201500	159590	26.3	500	5800	-91.4
18726	5210	0	0.0	0	0	0.0
18742	1595058	1400088	14.0	0	58000	-100.1



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18746	18523	2680	591.2	0	0	0.0
18764	1285000	1099085	17.0	10000	1100000	-99.1
18765	950005	870050	9.2	0	5000	-100.1
29203	55025	4500	1122.8	0	0	0.0
29206	15000	17500	-14.3	0	0	0.0
29209	58525	122000	-52.1	0	0	0.0
29220	185000	185525	-0.3	0	0	0.0
29222	854000	850100	0.5	0	0	0.0
29226	1800100	1505500	19.6	0	0	0.0
29230	5510	1785	208.7	0	0	0.0
29242	15055	20085	-25.1	0	0	0.0
29246	2501058	2000010	25.1	0	0	0.0
29265	200000	100000	100.1	0	0	0.0
29271	175800	0	0.0	0	0	0.0
Total:	115945031	111116172	4.4	12329985	15598426	-21.0

