

Computer Programming: Basic I

GameBoard: Module 4 Game Skills 3
Assignment: 4.08

Points: 10
Time: 45 min

Problem Definition: Create a program that calculates long distance phone charges given the rates for the first minute, the rate for additional minutes, and the total minutes of the call.

Specific Considerations: The following data represent the information needed to calculate a long distance phone bill: the date, a city, the rate for the first minute, the rate for any additional minutes, and the total minutes of the call.

June 16, Boston, .4698, .3740, 17
July 23, San Francisco, .5330, .4158, 5
Aug 9, Denver, .7896, .3290, 20
Dec 25, Orlando, .2354, .2243, 130

Using these sets of data, you can calculate the total phone bill for each date. The values you should get are shown below so that you can test your calculations for the Amount in the final column. The Order of Operations will be important in the calculation. Try it with pencil and paper first.

Phone Bill					
Date	To	Rate for First Minute	Rate for Addl. Minutes	Total Minutes	Amount
June 16	Boston	.4698	.3740	17	\$6.45
July 23	San Fran	.5330	.4158	5	\$2.20
Aug 9	Denver	.7896	.3290	20	\$7.04
Dec 25	Orlando	.2354	.2243	130	\$29.17
Total					\$44.86

You should also calculate the total amount for all four phone bills in the last column.

- Center the table horizontally and vertically in the middle of the screen.
- Include the column headings shown in the sample output above.
- Use neat spacing and make sure the numbers line up correctly.
- Include a dollar sign (\$) in the Amount column.
- Choose some interesting colors.

Please be neat and use "good programming practice" as illustrated in the FVS Bake Sale example.

Flowchart: A flowchart is required for this assignment. Save the file as *phone* (extensions will vary). Remember when to use the parallelogram *and* what should not be included.

Check Your Understanding: Remember that there needs to be a one-to-one correspondence between the variables in a **READ** statement and the data in a **DATA** statement. Your equation will need to allow you to charge a different rate for the first minutes than for the additional minutes. What number would you subtract from the total minutes to get the additional minutes? (For example, in the first set of data there are 17 “total” minutes, so there can only be 16 “additional” minutes.) You may have to fiddle with the format of the **PRINT USING** to get the data to line up correctly in columns and with decimal points in the proper position.

Grading Rubric: This assignment is worth 10 points and will be graded according to the following rubric.

- Required statements used: 2 out of 2 points
- Flowchart used: 2 out of 2 points
- Required material included: 2 out of 2 points
- Program ran properly: 2 out of 2 points
- Proper output: 2 out of 2 points

Submission Instructions: Save the program as *phone.bas* and submit the two zipped files as *phone.zip* file through the In Box as [Assignment 04.08](#).