25 points Homework Assignment #7B

Objectives:

1. Read data from a sequential input file.
2. Format a printed report into columns.
3. Align numeric columns on the decimal point.
4. Create and use the try/except statement.
5. Stop reading data from the file when the end of the file is reached.

This problem prints a payment due report listing each customer in the data file. Input will be from a data file. The test data can be found in the file named disks.txt which is located in the Homework 7 folder in D2L. You are not required to use functions (other than main). Study the Motel Example Problem in the Homework 7 folder in D2L which is very similar to this assignment.

The data file for this problem contains the customer’s name followed by a sales code (“C” or “c” = CD-RW and “D” or “d” = DVD-RW) and the number of spindles purchased by the customer. The price for a spindle of CD-RW discs is $16.50 and a spindle of DVD-RW discs costs $21.75 (use global constants). The report will contain a column headings line. For each customer in the data file, display the customer’s name, spindle code, number of spindles, and the payment due amount across one print line. Use the tab character to create columns for the report. Use a minimum field width format specifier to align the number of spindles and payment due amount (which should have 2 decimal positions since it is dollars and cents) columns. If the spindle code is invalid, the error message “invalid code” is printed where the payment due would normally appear (i.e. the payment column). At the end of the report, totals are printed for the total number of customers purchasing CDs, the total number of customers purchasing DVDs, and the total payment due amount.

The chart below shows 3 of the customers in the test data file. What is the payment due for each?

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Code | Spindles | Payment due |
| Rex Carr | C | 10 | $165.00 |
| Mark Downs | D | 3 | $65.25 |
| Wayne Storm | E | 9 | Invalid Code |

Print the data file disks.txt to see all the test data.

Submit each of the following in electronic format inside a compressed folder following class standards using the D2L drop box for Homework 7.

Use the logic diagrams drop box to submit:

1. The completed table of test data shown above. (2 points)

2. Program flowcharts drawn with MS-Visio showing your logical solution. (9 points)

Use the program drop box to submit:

3. A Python program implementing the solution shown in your flowcharts. (14 points)