Programming Assignment: Monthly Sales Report
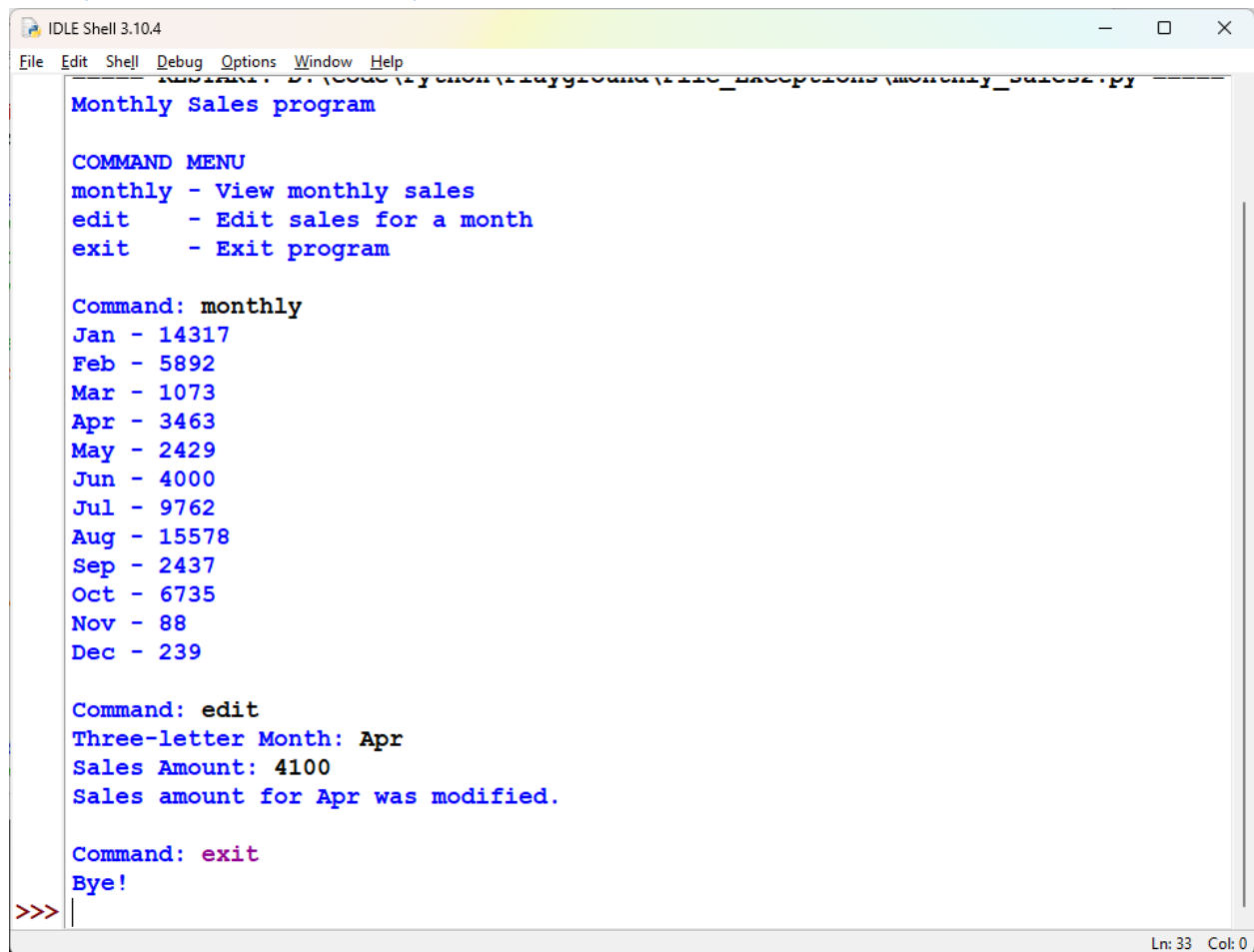
Problem Statement:

In this assignment, you will complete a program that reads the sales for 12 months from a file and shows the monthly sales data. In addition, this program should let the user edit the sales for any month.

Specifically, open the starter code given in monthly_sales_starter.py file. Read and understand the existing code – it has implemented the functions that handle printing welcome message and the rules, and also the main function that handles the command loop. You are supposed to implement the following functions that either read/write data or perform one of the commands. Here's what each function is supposed to do:

1. **read_sales:** Function to read contents of FILENAME and return the contents as list of lists. Since csv returns string values for all columns, function should convert the sales number (2nd item in each row) to integers.
2. **write_sales:** Function to write the contents of sales, a list of lists, to FILENAME.
3. **view_monthly_sales** Function accepts a list of lists with monthly sales values and prints the monthly sales values. See sample run #1 below.
4. **edit:** Function accepts a list of lists with monthly sales values, and lets user edit the sales data for one of the months. Specifically,
   a. Use a try/except block that will handle invalid input cases, give user correct feedback and return.
   b. prompts the user for a 3-letter month code. Raises an exception if user enters an invalid code. See sample run #2 below.
   c. prompts the user for the new sales numbers as an integer. If user enters invalid input (a non-integer input, e.g. 3333.33 or "thousand"), give user feedback and return. See sample run #2 below.
   d. In case of valid input, program should update the csv file with new data.

See the sample run below using the sample input csv file. Submit the program in a file with a name of the form first_last_monthly_sales.py. Make sure to add a block-comment at the start of the file that lists assignment title, class name, date, your name, and assignment description.

Sample Run #1: Valid input

File Edit Shell Debug Options Window Help

```
========= RESTART: D:\code\Python\Playground\File_Exceptions\monthly_sales2.py =========
Monthly Sales program

COMMAND MENU
monthly - View monthly sales
edit    - Edit sales for a month
exit    - Exit program

Command: monthly
Jan - 14317
Feb - 5892
Mar - 1073
Apr - 3463
May - 2429
Jun - 4000
Jul - 9762
Aug - 15578
Sep - 2437
Oct - 6735
Nov - 88
Dec - 239

Command: edit
Three-letter Month: Apr
Sales Amount: 4100
Sales amount for Apr was modified.

Command: exit
Bye!
>>>
```
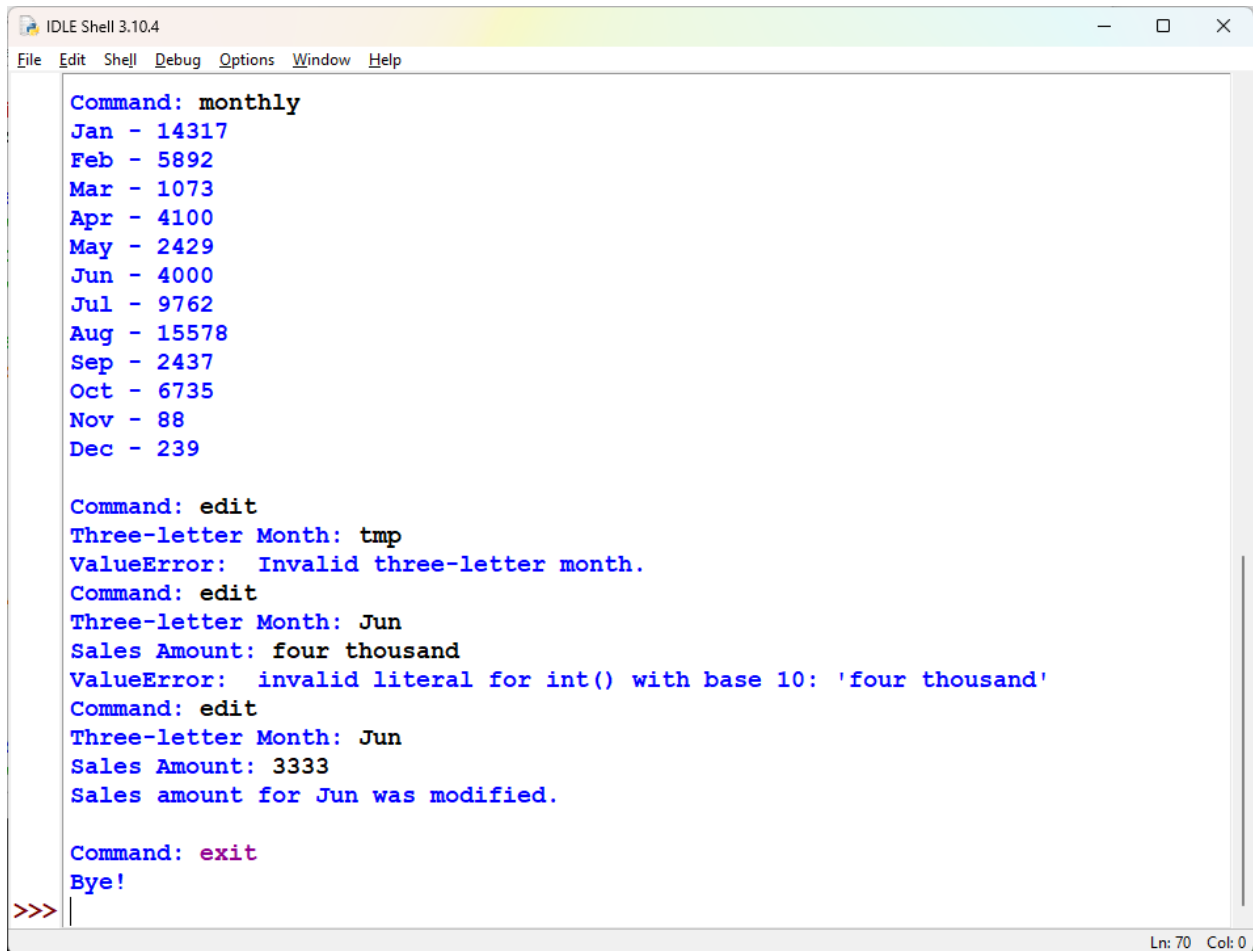
Ln: 33 Col: 0

Sample Run #2: Invalid input

```
IDLE Shell 3.10.4                                              —    □    ✕
File  Edit  Shell  Debug  Options  Window  Help

    Command: monthly
    Jan - 14317
    Feb - 5892
    Mar - 1073
    Apr - 4100
    May - 2429
    Jun - 4000
    Jul - 9762
    Aug - 15578
    Sep - 2437
    Oct - 6735
    Nov - 88
    Dec - 239

    Command: edit
    Three-letter Month: tmp
    ValueError:  Invalid three-letter month.
    Command: edit
    Three-letter Month: Jun
    Sales Amount: four thousand
    ValueError:  invalid literal for int() with base 10: 'four thousand'
    Command: edit
    Three-letter Month: Jun
    Sales Amount: 3333
    Sales amount for Jun was modified.

    Command: exit
    Bye!
>>> |
                                                        Ln: 70   Col: 0
```