Amex - May 2024 - Programming

Live Assignment 1

The following string represents the contents of a CSV file.
In the data below, the first record lists the names of the value or property.
There is no built-in functionality in Foundation or the Swift Standard library to process this data. You will need to write string-processing code to read in the data.

```
let csvFile = """
Name, Age, Address, Phone Number, Email, Favorite Number, Employed
Boone Malimoe, 19,7259 Anhalt Court,
776-410-0007,bmalimoe0@canalblog.com,142,false
Burgess Greasley, 33,04 Ridge Oak Street,
649-893-5297,ogreasley1@4shared.com,337,true
Derwin Brunel, 13,0843 Bunting Hill, 790-611-6437,dbrune
2@discovery.com,961,true
Sheffie Spadotto, 55,5298 Grover Court,
265-791-1163,5spadotto3@salon.com,479,true
Courtney Fearnyhough, 63,2102 Garrison Circle, 502-971-1269,
cfearnyhough4@wikipedia.org,876,true
Melloney Stickens, 19,97934 Crownhardt Plaza,
145-301-1842,mstickens5@facebook.com,852,false
Ellery Geere, 53,7 Kedzie Center, 515-764-9730,egeere6@adobe.com,516,false
Nikki Goodere, 61,6 Canary Parkway,
827-542-0107,ngoodere7@chicagotribune.com,0,true
Annabela Riddel,34,9132 Westridge Way, 605-920-8468,ariddel8@w3.org,672b,false
"""
```

Task:
1. Read the contents of the CSV file into a data structure that you create to hold each record.

Counter Task:
1. Find why some data is not being parsed.
2. Introduce error handling in solution.
3. Change method signature to accommodate model + error - Result
4. What are other ways we can create result structure, post answering I was asked to implement the same.
5. Sort based on model properties
6. Filtering models
7. Show only errors, show only names.

Live Assignment 2

```
var log = """
  2024-05-01 09:15:00  AAPL 100  $145.20
2024-05-01 09:16:32  AAPL 50  $144.75
  2024-05-01 09:17:45  AAPL 75  $146.10
2024-05-01 09:18:59  GOOGL 200  $2750.50
2024-05-01 09:20:12  GOOGL 150  $2800.25
2024-05-01 09:21:30  MSFT 80  $289.60
2024-05-01 09:22:45  MSFT 120  $290.20
2024-05-01 09:23:59  TSLA 90  $810.75
2024-05-01 09:25:12  TSLA 110  $820.00
2024-05-01 09:26:30  AMZN 70  $3440.25
2024-05-01 09:27:45  AMZN 60  $3455.00
"""

// Market data analyzer
// You have a string representing a log of market orders.
// Each string has: Timestamp  Security name (symbol)  Order amount  Order price
// Items in the list are not sorted.

// Task:
// Write a Swift class that analyzes the provided log and returns the following stats for each Symbol:
// - mean price
// - minimum price
// - maximum price
// - number of orders
// - total amount of stocks purchased

// example:
// AAPL
// min: US$175 15
// max: US$184 98
// maan: US$19069
//
```