CS390-01: Unix Programming — Program #6

Due at beginning of class, Monday, November 20 — (20 points)

(+ up to 5 point bonus, see next page)

For this program, you are to solve a similar problem to that in program 5, the awk assignment.

Input Data

Your program will accept an input data file that looks like the sample below. On each line of data there is each player's:

- first name
- last name
- number of plate appearances
- number of at bats
- number of single hits
- number of doubles
- number of triples
- number of home runs,
- and number of walks or hit by pitch

```
chipper jones 10614 8984 1671 549 38 468 1530
hank aaron 13941 12364 2294 624 98 755 1434
error example1 100 100 100
error example2 10614 8984 1671 5x9 38 468 1530
```

Output Report

Your output should tabulate each player's: batting average, slugging percentage and on base percentage. Your program must also handle the following 2 types of error in the input data:

- Not enough data to compute averages. See example1 above
- Incorrect data (i.e. not numbers). See example2 above

```
----- BEGIN STATISTICS REPORT -----

  LASTNAME, FIRSTNAME     AVG   SLG   OBP
     aaron, hank       : 0.305 0.555 0.373
  example1, error      : Unable to compute result. Not enough data. ***
  example2, error      : Unable to compute result. Invalid data.    ***
     jones, chipper    : 0.303 0.529 0.401
     … remaining records from the input set

----- END STATISTICS REPORT ----
```

Additional Program Requirements

- This program has the same computation and output formatting requirements as the awk assignment.
- The formulas for computing the player statistics were given in the awk programming assignment. They have not changed.
- There is a second type of error (not enough data) that needs to be detected in addition to number errors.
- The player data should be sorted by last name (and then first name in the event of a tie).
- Your program must run with the following command line. It will take the filename and use it to open a file for input in your program:

```
./program6.pl players.txt
```

BONUS (+5 points added to programs grade) Program Requirements

- Produce a second set of output (in addition to the first table) with the player records sorted (descending) by batting average. Throw out the error data records.
- Example:

```
----- Batting Average Report -----

  LASTNAME, FIRSTNAME     AVG
      cobb, ty          : 0.366
     aaron, hank        : 0.305
     jones, chipper     : 0.303

     … remaining valid records from the input set

----- END STATISTICS REPORT ----
```

Turn in a printout on the due date. Submit your program file to canvas.