BASH SHELL SCRIPTING - ASSIGNMENT 3a

1. Write a script to verify a .CSV (comma separated values file). The first line in the file is a HEADER row with column names as values; remaining rows except the last one are data rows and the last line is the TRAILER row with format YYYYMMDD, X rows, where YYYYMMDD is today's date in YYYYMMDD format and X is the number of data rows in the file. The validations required are listed below.
    a. Number of columns in the data rows should be the same as HEADER row.
    b. The data rows should not contain more than 10% blank attributes, where blank attributes are the ones which does not have any value.
    c. Count of data rows should be equal to value X in TRAILER record.
    d. Today's date should match the YYYYMMDD in trailer record.
2. CREATE a sample table with name TEST_SSL under the mysql root account. Configure the connection parameters SERVERNAME, USERNAME, PWD in a config file. Use the variables 'SET' in this config file to connect to the database using another script. The script should print the number of rows in TEST_SSL table.
3. Write a monitoring script to check the following. It should be possible to run these checks separately by supplying the corresponding argument option. Hint: Use getopts.
    a. Processes with biggest memory usage (command line option -p)
    b. List of mounted devices (command line option -m)
    c. Disks which are more than 90% full (command line option -d)
    d. 5 Biggest files created in the last one hour with their corresponding size in MB (command line option -f)
4. Write a minimalistic script to check plagiarism. Script should accept two file names as arguments. While comparing, it should ignore commented lines (assume there are no block comments) and lines with only white spaces. Script should compare two files line by line, ignoring the blank and commented lines, and then find the count of matching words. Script should output the percentage of matching words and report plagiarism if the percentage exceeds 80%.
5. Write a wrapper program which makes the above plagiarism check for all the files in a directory. It should call program 4.