

**CMSC 257**  
**Assignment 4**  
**Due: Monday April 17<sup>th</sup>, 2017**

**Batch shell script, Regular Expression, and Version Control (git)**

- what is a batch shell script?
  - shell reads from an input file
- What are regular expressions?
  - A regular expression (regex or regexp for short) is a special text string for describing a search pattern. You can think of regular expressions as wild cards on steroids. You are probably familiar with wild card notations such as \*.txt to find all text files in a file manager.
- What is version control tool?
  - Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.
- Instructions:
  1. Download Assignment from github using the below link.  
<https://classroom.github.com/assignment-invitations/d4571dbf8bae522c3fd9f3017da58062>
  2. Write a Batch shell script to read a text file.
  3. Use regular expression to do the below operations.
    1. Count the number of lines in the file
    2. Count the number of words in the file
    3. Find the most repetitive word in the file.
    4. Find the least repetitive word in the file
    5. Find the word count with below-given characteristics.
    6. Starts with “d” and ends with “d”, words can be both upper and lower case. (ex: Demand or demand)
    7. Starts with “A” or “a” and ends with any letter. (example: America, Amazon)
    8. Count the numeric words. (example: 53254 or 2513354, but it should not be “hit34jdk”).
    9. Count the alphanumeric words. (example : “abc254fj” or “125gsgd”)
  4. Git
    1. Add the shell scripts to git repository
    2. Commit the changes
    3. Push the commit to private repository from you downloaded.
  5. You should submit a file containing shell script and a report in text format.

**Note: Late assignments will lose 5 points per day up to a maximum of 3 days. Code must be submitted in the prescribed format. For questions on grading, contact the TA: Syed Khajamoinuddin. Email:lnusk@vcu.edu**