# Homework 2

**Due Date: February 16**

In this homework, you will create a tar file that you will submit electronically via Canvas. Submit before 11:59:59 pm on the due date for full credit.

At the end of your homework, please type and **virtually sign** the Honor Code pledge:

**I have abided by the Wheaton College Honor Code in this work.**

In what follows, use the files on the course web page. Also, these starting files should not be altered.

1. Create a **plain text** file with the name *first initial+last name+*`Answers.txt`. In my case, this would be `mgousieAnswers.txt`. You can do this with an editor or the use of `echo` commands and/or redirection. Enter your name at the top of this file. Then add answers to the questions below. For example, if question 3 asks how to display the entire file `foo.txt` in a terminal window, `mgousieAnswers.txt` at this point would be:

   ```
   Michael Gousie

   3. cat foo.txt
   ```

   Note that not all questions will need an answer in this file, because some solutions will create new files to submit.

2. We have seen that to run `a.out`, we have to type "`./a.out`". Do some searching to figure out how we can just type `a.out` and have the program run. What do you have to change in the `.bashrc` file to make this work?

3. Using `sort` and `head`, sort the file `baseballDB.txt` by home runs (HR), largest first. Add the result to your `Answers.txt` document after the problem number. The column headings should not be displayed. Do all of this with one command. This command should include how the data is added to your answer file.

4. What is the one line command you used in the previous problem?

5. Read through
   https://www.geeksforgeeks.org/linux-unix/awk-command-unixlinux-examples/
   This is a quick tutorial on `awk`.

6. Use `awk` to display the last name and OBP for each player in the the file `baseballDB.txt`. Don't worry about the headings. Add this output to your `Answers.txt` document.

7. What is the one line `awk` command you used for the previous problem?

8. Take a look at the file `actors.csv`. It shows various data on actors over the years. Use `awk` to display the first and last names of all those actors with a median rank of 1. Add this output to your `Answers.txt` document.

9. What is the `awk` command you used for the previous problem?

10. Again using `actors.csv` as input, use `awk` to create a file that contains the median rank, year, first name, and last name, separated by tabs. Store this new arrangement of data in the file `newActors1.txt`.

11. What is the `awk` command you used for the previous problem?

12. Using `awk` once again, find the last name of all the actors that have no first name listed. Number these 1-N, where N is the number of actors with no first name. Assume you do not know how many rows (records) there are. Store this data in the file `newActors2.txt`.

13. What is the `awk` command you used for the previous problem?

14. Create a tarball containing all of the files created above. Name this file using the same convention as noted above, as in `mgousieAnswers.tar`. Upload this file to Canvas before the due date.