

Bash Scripting

1. Copy the data file *lab9.dat* from the instructor's directory into your working directory as shown below. Make sure to include the period (.) in the command line.

```
cp /home/tao/Labs/lab9.dat .
```

Data in the file is as shown below. Note that the comma character separates fields in each line.

```
Data Structures,CIS163,Winter 2017
System Programming,CIS241,Fall 2016
Introduction to Java,CIS162,Fall 2015
```

2. Sort data in *lab9.dat* by the course number and redirect its standard output to file *lab9a*.
3. Write a command line to read data from file *lab9a* and produce data as follows. Save the results in file *lab9b*. Note that the tab character separates fields in the file. Use *gawk* to do.

```
Fall 2015      CIS162      Introduction to Java
Winter 2017   CIS163      Data Structures
Fall 2016     CIS241      System Programming
```

4. Write a command line to read data from file *lab9b* and produce data as follows. Note that the word *Fall* is followed by a blank character in file *lab9b*. So is the word *Winter*. Use *sed* to do.

```
F2015      CIS162      Introduction to Java
W2017      CIS163      Data Structures
F2016      CIS241      System Programming
```

5. Write a command line to implement the Linux command *basename*; that is, writing the last component of its pathname argument to standard output. For example, given the pathname *courses/cs241/examples/demo.c* as an argument, the command line writes *demo.c* to standard output. Note that the number of directory names before the filename can be zero or more. You can try your solution as shown below without having to create a script.

```
path=courses/cs241/examples/demo.c

echo $path | _____
```

You may use the *script* command to capture command lines that you have created to meet the above requirements and submit the log file in Blackboard. Make sure that you add the .txt extension to the log file you submit.