# Exercises (answers in the next page)

Connect to your ASW Ubuntu Linux instance. We will be working with the file <https://gist.githubusercontent.com/daattali/720431961c6c5394ae96/raw/10222380b7d3c9c43d22cc67e6afe84fef98ab9a/bcl-data.csv>, which is a “comma separated value” file, a very common file format where all the values are separated by commas. I have shortened the URL to <https://tinyurl.com/yz64ubyn>. To see this file in your own terminal, you can use the **wget** command to download the file from the Web, followed by **cat**:  
  
 wget -O bcl\_data.csv https://tinyurl.com/yz64ubyn

cat /home/jmadar/data/bc\_liquor\_sales.csv

Come up with a one line bash command to solve the problems below. You are allowed to use the following bash commands: **head**, **tail**, **grep**, **cut**, and **|**.

1. Find out the field names (first line of csv file)
2. Find out the first row of data (not the header row)
3. Find out the last row of data
4. Show both first and last rows
5. Retrieve all rows representing alcohol produced in Canada
6. Retrieve all BEERS from United States of America
7. Retrieve only “TYPE NAME ALCOHOL\_CONTENT” for TABLE WINE RED produced in FRANCE
8. Retrieve only “SUBTYPE NAME SWEETNESS” for TABLE WINE. The first five rows of the output display like the followings:

RED,COPPER MOON - MALBEC,14

WHITE,DOMAINE D'OR - DRY,11.5

RED,SOMMET ROUGE,12

WHITE,MISSION RIDGE - PREMIUM DRY WHITE,11

RED,ZINFANDEL - BIG HOUSE CARDINAL ZIN,13.5

Answers

1. Find out the field names (first line of csv file)  
     
   head -n 1 bcl\_data.csv
2. Find out the first row of data  
     
   head -n 2 bcl\_data.csv | tail -n 1
3. Find out the last row of data  
     
   tail -n 1 bcl\_data.csv
4. Show both first and last rows  
     
   head -n 2 bcl\_data.csv | tail -n 1; tail -n 1 bcl\_data.csv  
   # the semi-colon is used to combine 2 commands on the same line
5. Retrieve all rows representing alcohol produced in Canada  
     
   grep 'CANADA' bcl\_data.csv
6. Retrieve all BEERS from United States of America  
     
   grep 'BEER.\*UNITED STATES OF AMERICA' bcl\_data.csv
7. Retrieve only “TYPE NAME ALCOHOL\_CONTENT” for TABLE WINE RED produced in FRANCE  
     
   grep 'TABLE WINE RED' bcl\_data.csv | cut -f 1,4,5 -d ,
8. Retrieve only “SUBTYPE NAME SWEETNESS” for TABLE WINE. The first five rows of the output display like the followings:  
     
   grep 'TABLE WINE' bcl\_data.csv | cut -f 2,4,5 -d , | awk -F '"' '{print $2","$4$5}' | cut -f 3- -d ' '