<u>**Lab 7:**</u> BASH script programming <u>**date:**</u> 11/02/21

In this lab assignment we will be practicing with BASH script programming. Most of the features used in this assignment are explained in the textbook and slides but there might be a few things that you will need to learn from other sources. You can always use a search engine to get more information on commands or ways to do certain things.

List of Tasks

Use vi to create a file named **lab7scr_2344_t#** (where # is your two-digit team number) containing the script that will perform the tasks described below. Make sure your name and course are at the top of the file (see example below) and that this script is **executed** by the **BASH shell**.

To begin, create a directory **lab7** in your home directory and move into it. Copy the file **corp_phones** from **/files/labs/lab7** to this directory.

Write a shell script which displays a menu that allows the user to add a new record, delete a record, list the information sorted by name, and list the information sorted by phone number.
Each of these options must be implemented in a separate **function**. Your functions must clear the screen before performing theirs tasks and once they are executed, the menu must be displayed again. The functions must be defined in a separate file named **lab7fun_2344_t#** (where # is your team number).
Below you have samples of the screens your script should produce.

Screen capture corresponding to the *main menu*.

```
        Corporate Phones Menu
        ==============================

    A - Add New Record
    D - Delete Record
    S - List Sorted by name
    N - List Sorted by number
    Q - Quit:
```

Screen capture corresponding to the *Add New Record* option.

```
            New Corporate Phone Record
            ==========================

Please enter the information in the format shown below

number:last name:first name:initial:dept code:jobtitle:date

956-381-1234:Doe:Joe:A:4699:Assist. Man.:1-19-2000

Confirm addition? n

Record was not added to the file

Press Enter to continue
```

Screen capture corresponding to the *Delete Record* option.

```
                Corporate Phone Record Deletion
                ===============================

Please enter the phone number to be deleted: 956-381-1234

The record to be deleted is:

956-381-1234:Doe:Joe:A:4699:Assist. Man.:1-19-2000

Confirm deletion? n

Record was not deleted from the file

Press Enter to continue
```

Screen capture corresponding to the *List Sorted by name* option.

```
                Corporate Phone List Sorted by Name
                ===================================

Albertson    Jeannette   K  219-555-7176 5547 DC Clerk   02-19-2007
Brooks       Sally       H  219-555-4511 4540 Programmer 02-20-2007
Doe          Joe         A  956-381-1234 4699 Assist. Ma 1-19-2000
Harrison     Joel        M  219-432-4567 4540 Accountant 09-12-1985
Mitchell     Barbara     C  219-555-4587 4541 Admin Asst 12-14-1995
Mitchell     Bob         D  219-433-4587 4561 Administra 1-04-1990
Moore        Sarah       H  219-433-4591 4500 Dept Manag 08-01-1978
Mullins      Allen       L  219-555-7175 7527 Sales Rep  02-19-2007
Olson        Timothy     H  219-433-4589 4544 Supervisor 06-30-1983
Polk         John        S  219-431-4527 4520 Accountant 09-22-1998
Robinson     Albert      J  219-555-4501 4501 Secretary  08-12-1997

Press Enter to continue
```

Screen capture corresponding to the *List Sorted by number* option.

```
                Corporate Phone List Sorted by Number
                =====================================

219-431-4527 Polk        John        S 4520 Accountant 09-22-1998
219-432-4567 Harrison    Joel        M 4540 Accountant 09-12-1985
219-433-4587 Mitchell    Bob         D 4561 Administra 1-04-1990
219-433-4589 Olson       Timothy     H 4544 Supervisor 06-30-1983
219-433-4591 Moore       Sarah       H 4500 Dept Manag 08-01-1978
219-555-4501 Robinson    Albert      J 4501 Secretary  08-12-1997
219-555-4511 Brooks      Sally       H 4540 Programmer 02-20-2007
219-555-4587 Mitchell    Barbara     C 4541 Admin Asst 12-14-1995
219-555-7175 Mullins     Allen       L 7527 Sales Rep  02-19-2007
219-555-7176 Albertson   Jeannette   K 5547 DC Clerk   02-19-2007
956-381-1234 Doe         Joe         A 4699 Assist. Ma 1-19-2000
```

```
Press Enter to continue
```

The functions must work in the following way:

Add new record:
- prompts the user to enter the information as a whole record with the fields separated by colons.
- asks the user to confirm the addition of the record. If the user enters **y** or **Y**, the record is added to the file; otherwise, a message indicating the record has not been added is displayed.

Delete record:
- prompts the user to enter the phone number corresponding to the record to be deleted and displays the record.
- asks the user to confirm the deletion of the record. If the user enters **y** or **Y**, the record is deleted from the file; otherwise, a message indicating the record has not been deleted is displayed.

List file sorted by name:
- displays the file sorted by last name and first name.

List file sorted by phone number:
- displays the file sorted by phone number.

IMPORTANT:
- any function that creates a temporary file to perform its task must delete it before returning control to the menu.
- pay attention to the format of the output, prompts, etc. The order of the columns is important (see my samples above), titles should be centered.
- all files (lab7scr_2344_t#, lab7fun_2344_t#, and corp_phones) must be in the same directory to run your system (that is, do not use any path to access the data file).

Add a heading to both of your script files like the one shown below.

```
# =======================================================================
# Script name: lab7scr_2344_t#
# By:          Joe Doe and Jane Dane
# Date:        4/16/19
# Purpose:     Prototype for a corporate phone directory system
# =======================================================================
```

If you have any questions, please do not hesitate to post them on the Discussions board of Blackboard.

When done, put lab7scr_2344_t# and lab7fun_2344_t# in a compressed folder named lab7_2344_t# (where # is your two-digit team number) and submit it through Blackboard using the "Assignments" tool. Do Not email it.