Homework #6

Turn In:

1. Exercise #1 – Due on **Saturday, July 25, 2020 at 11:00pm**
   a) For each exercise, a package must be generated to include the following items:
      - Copy of your source file (C program)—your source file MUST BE NAMED as **`cis6Summer2020YourNameHw6Ex1.c`**
      - Copy of output (copy and paste to the end of your program as **`PROGRAM_OUTPUT`** comment block)
      - Copy of **`Logic_Code_Output_COMMENTS`** (as a separate comment block) after the PROGRAM_OUTPUT.

   b) Emailing each package as follows,
      - One email message for each exercise.
      - The SUBJECT line of the message should have the following line:

`cis6Summer2020YourNameHw6Ex1.c`

      - Attaching the source file that was created in part a).

3. Q.E.D.

****

1. Coding Assignment

Exercise 1 – Due Saturday, July 25, 2020

(1) Write a C menu program with call to functions to produce the output given below.

(2) The program should display the output to screen as

```
CIS 6 - Introduction to C Programming
Laney College
YourName

Assignment Information --
  Assignment Number:  Homework 6,
                      Coding Assignment -- Exercise #1
  Written by:         YourName
  Submitted Date:     Due Date
```

You need to replace "**`Your Name`**" with your real name and "**`Due Date`**" with the specified due date.

The above result should come from a call to a function named as `displayClassInfoYourName()`, where `YourName` must be replaced by your first name and your last name initial. For examples, if your name is **`John Smith`** then `YourName` should be `JohnS` throughout all of your work/code as mentioned.

(3) Write a function names as **`displayUniqueEvenOddDigitYourName()`** that will

- Have an array of integers and its size as arguments; and
- Then display the information of the even and odd digits from the given integers as shown in the sample output below.

(4) A menu program will produce the output as follows,

```
// SAMPLE OUTPUT
CIS 6 - Introduction to C Programming
Laney College
YourName

Assignment Information --
  Assignment Number:  Homework 6,
                      Coding Assignment -- Exercise #1
  Written by:         YourName
  Submitted Date:     Due Date


************************************************
*                    MENU - HW #6              *
*  1. Calling displayUniqueEvenOddDigitYourName() *
*  2. Quit                                     *
************************************************

Enter an integer for option + ENTER: 6

Wrong Option!


************************************************
*                    MENU - HW #6              *
```

```
*  1. Calling displayUniqueEvenOddDigitYourName() *
*  2. Quit                                         *
***************************************************
Enter an integer for option + ENTER: 1

Please select the size of the array -- (2 or 5): 2
  Enter 2 value(s) for the array elements –
    Enter integer #1: -1
    Enter integer #2: 18

  Calling displayUniqueEvenOddDigitYourName() with 2 int's --
    There is/are 1 unique even digit(s).
      8 occurs 1 time(s)

    There is/are 0 unique odd digit(s).


***************************************************
*                    MENU – HW #6                 *
*  1. Calling displayUniqueEvenOddDigitYourName() *
*  2. Quit                                         *
***************************************************
Enter an integer for option + ENTER: 1

Please select the size of the array -- (2 or 5): 5
  Enter 5 value(s) for the array elements –
    Enter integer #1: -1
    Enter integer #2: 189
    Enter integer #3: -20225
    Enter integer #4: 180
    Enter integer #5: -1767

  Calling displayUniqueEvenOddDigitYourName() with 5 int's --
    There is/are 2 unique even digit(s).
      2 occurs 3 time(s)
      6 occurs 1 time(s)

    There is/are 3 unique odd digit(s).
      5 occurs 1 time(s)
      7 occurs 2 time(s)
      9 occurs 1 time(s)


***************************************************
*                    MENU – HW #6                 *
*  1. Calling displayUniqueEvenOddDigitYourName() *
*  2. Quit                                         *
***************************************************
Enter an integer for option + ENTER: 2

Have fun!
```

Your program should have and use the following functions,

displayClassInfoYourName()

displayUniqueEvenOddDigitYourName()

where `YourName` must be replaced by your first name and your last name initial as mentioned.

Each of the sample runs will have the option and values selected by the user.

(4) Save the program as **`cis6Summer2020YourNameHw6Ex1.c`**; and

(5) The above output should be copied and added to the end of the code in the OUTPUT comment block.