Week 1 Programming Assignment - Review of variables, constants, conditional structures, loops

**NOTE: I cannot stress enough the importance of doing your own work!**

**DO NOT COPY FROM CLASSMATE OR THE WEB!!!**

1. Write a program named week1fitness.cpp that calculates the charges for membership in the Chualar Fitness Club. The Club has four membership packages to choose from: standard adult membership, family membership, senior membership and corporate membership. The program presents a menu that allows the user to choose the desired package an then calculate the cost of membership. When the user selects the option 5 to exit the program, the program will be terminated.

| Membership Packages | Monthly Cost ($) |
|---|---|
| Adult | 40.00 |
| Family | 80.00 |
| Senior | 20.00 |
| Corporate | 30.00 |

Sample output from program run:

Chualar Fitness Club Membership Menu
1. Standard Adult Membership
2. Family Membership
3. Senior Membership
4. Corporate Membership
5. Exit

Enter your choice: **2**
For how many months: **12**
The total charges are $ 960.00

Chualar Fitness Club Membership Menu
1. Standard Adult Membership
2. Family Membership
3. Senior Membership
4. Corporate Membership
5. Exit

Enter your choice: **8**
That is an invalid option. Choose again.

Chualar Fitness Club Membership Menu
1. Standard Adult Membership
2. Family Membership
3. Senior Membership
4. Corporate Membership
5. Exit

Enter your choice: **5**
Thank you and make it a great day!

2. Two arrays *ara1* and *ara2* are *identical* if they have the same contents. Write a program naamed Week1identical.cpp with the following functions:

-> a function that allows the user to fill *one* array with up to 10 integers. This function will be called twice, once for each array

-> a function that determines whether or not the arrays are identical. This function should return a Boolean value, indicating if the arrays are identical or not.

-> a function to print out the contents of the two arrays

-> a function to print out whether or not the arrays are identical

Sample output from program run:

```
Enter 10 integers:
1
2
3
4
5
4
3
2
1
2
Enter 10 integers:
1
2
3
4
5
4
3
2
1
1
array 1:  1  2  3  4  5  4  3  2  1  2
array 2:  1  2  3  4  5  4  3  2  1  1


The arrays are not identical.
```

3. Write a program named Week1digits.cpp that displays how many digits are in an integer entered by the user. The program should have the following functions:

-> a function to get an integer value from the user. The function should use pass by reference for the user's input.

-> a function to determine the number of digits in the user's input. For example, if the user input 45, the value returned from this function would be 2. (HINT: Use the / operator and a counter.)

-> a function to print the user' input and the number of digits in the number

Sample output from program run:

Enter an integer:  12312543
The number 12312543 has 8 digits.

---