CSc 2720 - Data Structures: Lab 1

How to Submit: Please submit your answers to Lab-1 submission folder on iCollege by **1/15/2021** by **11:00pm** ET.
Failure to submit will result in a zero for this lab. Problem 1 needs its solution to be typed and Problem 2 requires programming. If the submitted code for Problem 2 does not compile and or the submitted code is corrupted then a score of zero will be awarded.

Problem 1: [20 points]

For each of the following sub-programs, determine the number of times the statement "System.out.println(y)" will be executed; otherwise, indicate if it an infinite loop.

```
int y = 15;
while(y>=0){
      System.out.println("y");
       y = y - 1 ;
}
```

```
int y = 5;
do{
       System.out.println("y");
       y-=1;
 }while(y<0);
```

```
int y = 5;
while(y>0){
      System.out.println("y");
 }
```

```
for( i=0;i<140;i++)
    System.out.println("y");
```

```
int y = 3;
do{
      System.out.println("y");
      y+=2;
 }while(y<=9);
```

```
for(i=50;i<640;i++)
    for(j=2;j<10;j++)
        System.out.println("y");
```

Problem 2: [80 points]

Given two arrays containing unique elements, write a Java function that computes their intersection. (The result can be in any order)

Example 1:

```
Input: nums1 = [1,2,3,4,5,6,7], nums2 = [7,2,0,10]

Output: [2,7]
```

Example 2:

```
Input: nums1 = [4,9,5], nums2 = [9,4,7,8]

Output: [9,4]
```