1. In which situation would it be best to choose a sequential search instead of a binary search?
   1. When the data cannot be sorted.
   2. When there is a lot of data
   3. When the data consists of numbers in a known range
   4. When the searching will happen often
   5. Never, since binary search is more efficient.
2. Consider the method below , which is intended to return true if there is atleast one duplicate in the array and false if there are no duplicates.

**boolean** hasDuplicate(**int** [] nums){  
  
 **for**(**int** k=0; k <nums.**length**-1;k++){  
 **if**(nums[k] == nums[k+1]))  
 **return true**;  
 }  
  
 **return false**;  
  
}

Under which condition will the method not necessarily produce the desired result ?

1. When the array is sorted in increasing order.
2. When the array is sorted in decreasing order
3. When the values in the array are all positive
4. When the values in the array are all the same.
5. When the array has atmost 2 elements/

**public void** modParams(**int**[] x, **int** [] y, String[] s){  
  
 x[1]=5;  
 y=x;  
 s[1]=**new** String(**"five"**);  
 s = **new** String[3];  
 s[1]= **new** String(**"six"**);  
}  
  
**public void** print(){  
 **int**[] a = {1,2,3};  
 **int**[] b = {11,22,33};  
 String[] s = {**"one"**,**"two"**,**"three"**};  
  
 modParams(a,b,s);  
  
 System.***out***.println(a[1] + **" "** + b[1]+**" "**+s[1]);  
}

What is printed when print is called ?

1. 2 22 two
2. 5 22 two
3. 5 5 two
4. 5 22 five
5. Describe the problem in the following code. What changes would fix the problem ?

int[] numbers = {3,2,3,6,9,10,12,32,3,12,6};

for(int count=1;count<=numbers.length;count++)

System.out.println(numbers[count]);

1. When looking for an element in a sorter array , which algorithm is more efficient ?
2. Sequential search
3. Binary search
4. Selection sort
5. Insertion sort
6. They are all equally efficient.
7. Write the a method named backWardLoop() and declare an array of 10 elements and iterate the array backwards and print the values in the console.
8. Declared a string array of 3 elements and iterate and print the array using simplified for loop.
9. What will be the output of the following code?

int[] num = {1,2,3}; // available indexes are 0 ,1,2

System.out.println(num[3]);

1. Create a Car Class and the members of the class are owner, model.
   1. Create a Car Collection class and create a car array of size 2.
      1. Create a addCar method that takes in a car object as an input and add the car object to the car array.
         1. Increare the car carr size by 2 if the size of the array reaches it limit.
      2. Write a printCar method that prints all the Car objects in the array.
   2. Create a CarCollectionClient class and create three car objects.
      1. Call the addCar methd in the CarCollection class and add the car to the car array.
      2. Call the addCar method three times.
      3. Call the printCar method and print all the Car objects.