


1) Which of the following correctly initializes an array arr to contain four elements each with value 5?

I int [] arr=new int[5] ← 

II int[] arr={5,5,5,5};

III int[] arr=new int[4];  
for(int i=0; i<arr.length; i++)  
arr[i]=5;

a) I only  
b) II only  
c) III only  
d) I and II  
e) II and III

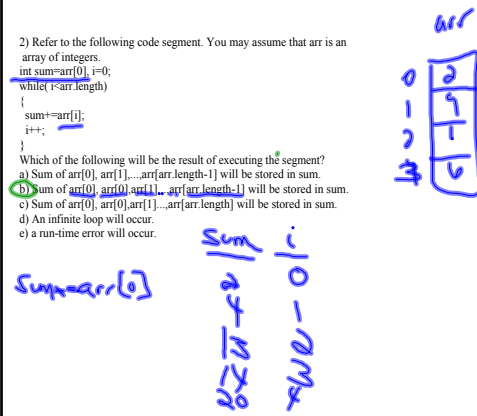
Feb 14-10:27 AM

2) Refer to the following code segment. You may assume that arr is an array of integers.

```
int sum=arr[0], i=0;
while(i<arr.length)
{
    sum+=arr[i];
    i++;
}
```

Which of the following will be the result of executing the segment?

a) Sum of arr[0], arr[1], ..., arr[arr.length-1] will be stored in sum.  
b) Sum of arr[0], arr[0], arr[1], ..., arr[arr.length-1] will be stored in sum.  
c) Sum of arr[0], arr[0], arr[1], ..., arr[arr.length] will be stored in sum.  
d) An infinite loop will occur.  
e) A run-time error will occur.



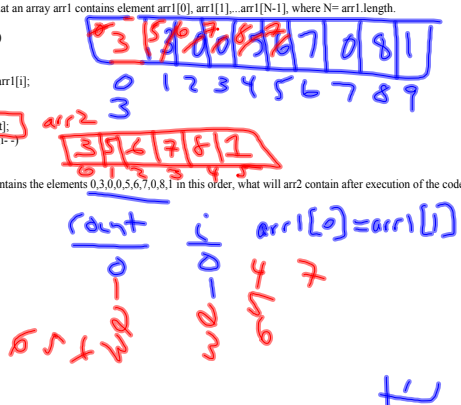
Feb 28-9:55 AM

3) You may assume that an array arr1 contains element arr1[0], arr1[1], ..., arr1[N-1], where N= arr1.length.

```
int count=0;
for(int i=0; i<N; i++)
    if(arr1[i]!=0)
    {
        arr1[count]=arr1[i];
        count++;
    }
int[] arr2=new int[count];
for(int i=count-1; i>=0; i--)
    arr2[i]=arr1[i];
```

If array arr1 initially contains the elements 0,3,0,0,5,6,7,0,8,1 in this order, what will arr2 contain after execution of the code segment?

a) 3,5,6,7,8,1  
b) 0,0,0,0,3,5,6,7,8,1  
c) 1,8,7,6,5,3  
d) 0,3,0,0,5,6,7,0,8,1  
e) 3,4,6,7,8,1,0,0,0,0




Feb 28-9:56 AM

4) public class Tester

```
{
    private int[] testArray={4,5,6};
    public void increment(int n)
    {
        testArray[n]+=2;
    }
    public void testMethod()
    {
        for(int i=0; i<testArray.length; i++)
        {
            increment(i);
            System.out.println(testArray[i]);
        }
    }
}
```

What output will be produced by invoking testMethod for a Tester object?

a) 3 4 5    b) 4,5,6    c) 6,7,8    d) 0 0 0    e) ArrayIndexOutOfBoundsException



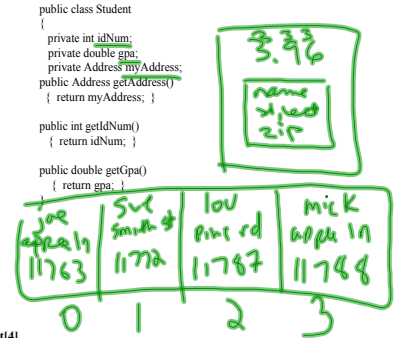
Feb 28-9:56 AM

```
public class Address
{
    private String myName;
    private String myStreet;
    private String myCityStateZip;
    public String getName()
    { return myName; }
    public String getStreet()
    { return myStreet; }
    public String getCityStateZip()
    { return myCityStateZip; }
}

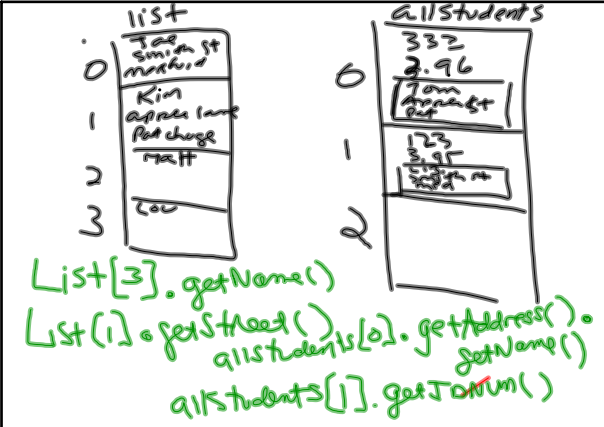
public class Student
{
    private int idNum;
    private double gpa;
    private Address myAddress;
    public Address getAddress()
    { return myAddress; }
    public int getIdNum()
    { return idNum; }
    public double getGpa()
    { return gpa; }
}
```

5) Address[] list= new Address[4];  
Draw what list could look like.

Student[] allStudents= new Student[4]  
draw what all Students would look like.



Feb 28-9:56 AM



List[3].getName()  
list(1).getStreet()  
allStudents[0].getAddress().getName()  
allStudents[j].getGpa()

Feb 29-11:42 AM

6) Here is a code segment to generate a list of names only:

```
for(int i=0; i<list.length; i++)
    code
```

Which is a correct code line:

- a) ~~System.out.println(Address[i].getName());~~
- b) ~~System.out.println(Address.list[i].getName());~~
- c) ~~System.out.println(list[i].Address.getName());~~
- d) ~~System.out.println(list[i].getName());~~
- e) ~~System.out.println(list.getName[i]);~~

*list.get(i)*

Feb 28-9:57 AM

7) Using the array `allStudents` from above which is the correct code to generate a list of student names only?

```
I for(int i=0; i<allStudents.length; i++)
    System.out.println(allStudents[i].getAddress().getName());
```

```
II Address a;
for(int i=0; i<allStudents.length; i++)
{
    a = allStudents[i].getAddress();
    System.out.println(a.getName());
}
```

```
III for(int i=0; i<allStudents.length; i++)
    System.out.println(allStudents[i].getName());
```

a) I only   b) II only   c) III only   d) I and II only   e) I, II and III

Feb 28-9:57 AM

8) Let list be an ArrayList containing these Integer elements:

2,5,7,6,0,1

Which of the following statements would NOT cause an error to occur? Assume that each statement applies to the given list independent of the other statements.

- a) ~~Object ob = list.get(6);~~
- b) Integer intOb = list.get(2); ✓
- c) ~~list.set(6,9);~~
- d) ~~Object o = list.remove(6);~~
- e) list.add(6,8); ✓

Feb 28-9:57 AM

9) Consider the following code segment, applied to list, an ArrayList of Integer values.

```
int len=list.size();
for(int i=0; i<len; i++)
{
    list.add(i+1, i);
    list.set(i, i+2);
}
```

If list is initially 6 1 8, what will it be following execution of the code segment?

a) 2 3 4 0 1 2   b) 2 3 4 6 2 2 0 1 8   c) 2 3 4 2 1 8   d) 2 3 4 6 1 8   e) 2 3 3 2

*len 3   0*

*6 1 8*

*list.add(1, 0)*

*list.set(0, 2)*

*6 0 1 8*

*2 0 1 8*

*2 0 1 1 8*

*2 3 1 1 8*

*2 3 2 1 8*

*2 3 4 2 1 8*

*2 3 4 2 1 8*

Feb 28-9:57 AM

10) Consider the following method:

```
public void censorship( ArrayList a )
{
    for( int i = 0; i < a.size(); i++ )
        if( a.get( i ).length() == 2 )
            a.remove( i );
}
```

Assume that the `ArrayList blah` initially contains the following Strings:

["it", "my", "each", "of", "two", "letter", "word", "is", "an", "evil", "word", "blah"]

What will the contents of `blah` be after calling `censorship( blah )`?

- a) each, two, letter, word, evil, word, blah
- b) if, each, two, letter, word, an, evil, word, blah
- c) my, each, two, letter, word, an, evil, word, blah
- d) if, my, each, of, two, letter, word, is, an, evil, word, blah
- e) if, my, of, is, an

Feb 28-9:58 AM

11) Write down three differences between an array and an ArrayList.

next page

12) Write the code to construct an ArrayList named `myList` and insert the integers 1, 2, and 3.

```
ArrayList<Integer> myList = new ArrayList<Integer>();
```

13) Write the code to construct an ArrayList of Strings and add your three favorite friends names.

```
ArrayList<String> friends = new ArrayList<String>();
friends.add("sue"); etc.
```

14) Use a regular for loop to print out the names all on different lines.

```
for(int x=0; x<mylist.size(); x++)
    System.out.println(myList.get(x));
```

15) Use a for-each loop to print out the names on different lines

```
for( String s:friends )
    System.out.println(s)
```

Feb 28-9:58 AM

Array	ArrayList
- Holds primitives	- no primitives
- holds objects	- only holds objects
- can't be resized (Static)	- can be resized - dynamic
- .length	.size()
- [x]	get(x)
- {3,4,5}-initializer list	- remove(), add(), set()

Feb 15-8:06 AM

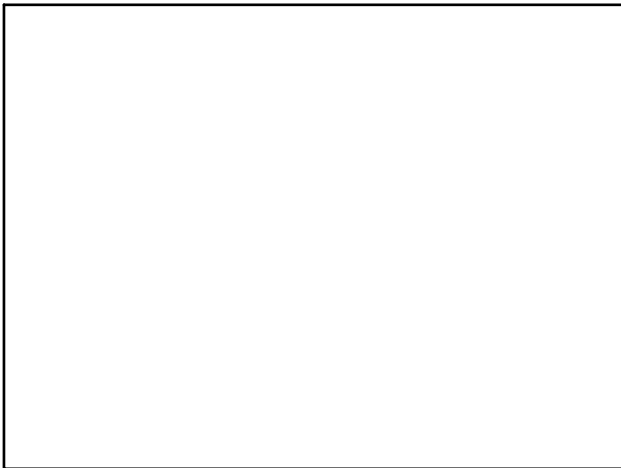
```

16)Write the code to construct and ArrayList of Strings called words and add the contents "I", "Love", "Java"
    ArrayList<String> words = new ArrayList<String>();
Write what words will look like after the following
17) words.add("alot");
    17) I Love Java alot
18)words.add(1,"sortof");
    18) I sortof Love Java alot
19)words.add(2,"today");
    19) I sortof today Love Java alot
20)words.set(2,"do");
    20) I sortof do Love Java alot
21)words.add(4,"programming");
    21) I sortof do Love programming Java alot
    22) I sortof do Love five programming Java alot
    23) I do Love five programming Java alot
22)words.add(4,"five");
23)words.remove(1);

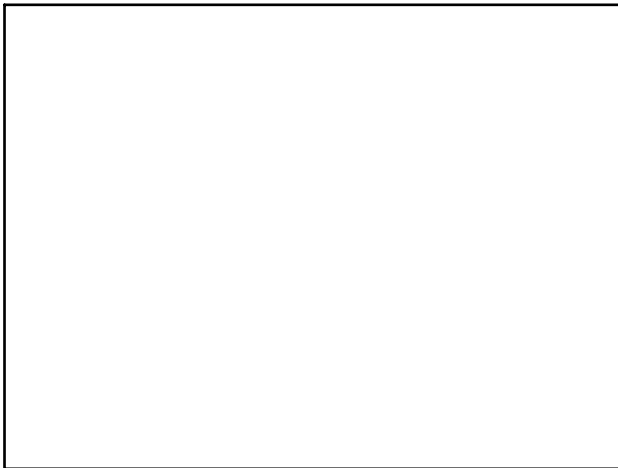
24) Assume you have an ArrayList of Doubles called nums with values - [2.0, 3.0, 4.0]. Write the code necessary to make nums
have the values -- [2.0, 2.5, 3.0, 3.5, 4.0].
    nums.add(1,2.5);
    nums.add(3,3.5);

25) Assume you have an ArrayList of Doubles called nums with values -
[2.0, 2.5, 3.0, 3.5, 4.0]. Write the code necessary to make nums have the values
[2.0, 3.0, 4.0].
    nums.remove(1);
    nums.remove(2);
    
```

Feb 28-9:56 AM



Feb 27-8:57 AM



Feb 14-10:15 AM