Exam Set 14E
AP Computer Science A

Name ____Period__________

1. Refer to the code below to answer the following

```
String s = “Get here Thanksgiving!”;
String m = “er”;
int j = 8, z = 99;
```

(a)
int k = s.indexOf(m);
System.out.println(k);
	5

(b)
int k = s.indexOf(‘T’);
System.out.println(k);
	9

(c)
char p = s.charAt(6);
System.out.println(p);
	r

(d)
int k = s.indexOf(z);
System.out.println(k);
	-1

(e)
int k = s.indexOf(‘g’, j);
System.out.println(k);
	15

(f)
char p = s.charAt(z – 90);
System.out.println(p);
	T

(g)
int k = s.indexOf(m, 15);
System.out.println(k);
	-1

(h)
int k = s.indexOf(z + 2, 4);
System.out.println(k);
	5

(i)
boolean k = s.contains(m);
System.out.println(k);
	true

(j) String s2 = “ JAVA “; String k = “!” + s2.trim() + “!” System.out.println(k);	**!JAVA!**
(k) System.out.println(m.compareTo(s));	**30**
	/11

__________/21

2. The Alphabetize class below, alphabetizes three words. Consider the following examples. Write the Alphabetize class.

Values of Strings s1, s2, and s3 before	**Values of s1, s2, and s3 after**
String s1 = “cat”; String s2 = “car”; String s3 = “dog”;	String s1 = “car”; String s2 = “cat”; String s3 = “dog”;
String s1 = “dog”; String s2 = “cat”; String s3 = “car”;	String s1 = “car”; String s2 = “cat”; String s3 = “dog”;

```
public class Alphabetize{

     public static void main(String args[]){


     //check if s1 is last
     if(s1.compareTo(s2)>0 && s1.compareTo(s3)>0){
          temp = s3;
          s3 = s1;
          s1 = temp;
     }
     //check if s2 is last
     if(s2.compareTo(s1)>0 && s2.compareTo(s3)>0){
          temp = s3;
          s3 = s2;
          s2 = temp;
     }
     //compare s1 and s2
     if(s1.compareTo(s2)>0){
          temp = s2;
          s2 = s1;
          s1 = temp;
     }
     System.out.println(s1 + " " + s2 + " " + s3);













     }

}
```

Score ___________/21

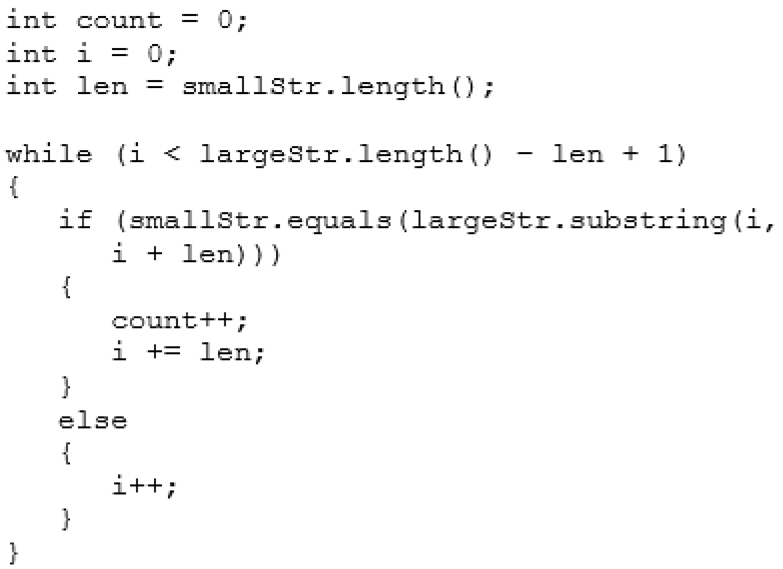
3. Write an algorithm that could be used to count the number of times a string occurs in another string. Consider the examples below[1]. This algorithm requires that you incorporate a loop along with the substring() and length() methods.

String to search	String to find	Occurrences
BAAB	AA	1
AAAAA	AA	2
AABABABAA	ABA	2
ABBAABB	ABA	0

```
public class FindOccur{

     public static void main(String args[]){
```

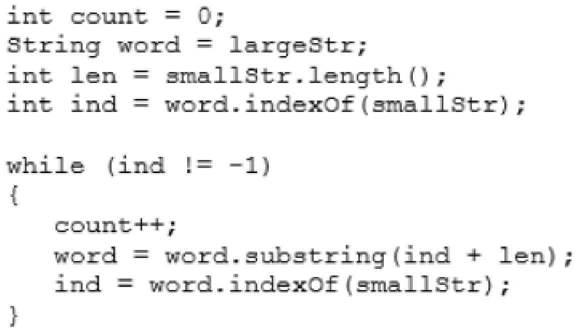
Solution 1



```
int count = 0;
int i = 0;
int len = smallStr.length();

while (i < largeStr.length() - len + 1)
{
   if (smallStr.equals(largeStr.substring(i,
      i + len)))
   {
      count++;
      i += len;
   }
   else
   {
      i++;
   }
}
```

Solution 2



```
int count = 0;
String word = largeStr;
int len = smallStr.length();
int ind = word.indexOf(smallStr);

while (ind != -1)
{
   count++;
   word = word.substring(ind + len);
   ind = word.indexOf(smallStr);
}
```

```
     }

}
```

[1] Adapted from the 2020 AP Computer Science A Exam

Score __________/21

Score __________/21