

AP COMPUTER SCIENCE A – RANDOM INTEGERS – CLASS WORK

1) Type in the class RandomArray as listed below.

```
import java.util.Random;
/**/
public class RandomArray {
    /**/
    public static void main ( String [] arg ) {
        /**/
        long seed;
        int ri;
        int [] ia;
        Random r;
        /**/
        if ( arg.length != 1 ) {
            System.out.println();
            System.out.println("Usage:");
            System.out.println("java RandomArray password");
            return;
        }
        /**
         * Seed the random number generator with a password
         */
        seed=(long)arg[0].hashCode();
        r=new Random(seed);
        /**
         * Generate a list of all the int's from 0 to 9 (inclusive) in random order
         */
        ia=new int [10];
        for ( int i=0; i<10; ++i ) ia[i]=10;
        for ( int i=0; i<10; ++i ) {
            while ( true ) {
                ri=r.nextInt(10);
                if ( !contains(ia,ri) ) {
                    ia[i]=ri;
                    break;
                }
            }
        }
        /**
         * Print the random list
         */
        System.out.println();
        for ( int i=0; i<10; ++i ) System.out.println(ia[i]);
        /**/
        return;
    }

    /**/
    private static boolean contains( int [] ia, int n ) {
        /**/
        for ( int i=0; i<10; ++i ) {
            if ( ia[i] == n ) return true;
        }
        return false;
    }
}
```

2) Run the program with a password. What does the program do?

3) Run the program with a different password. What does the program do?