
Write one program and include these methods. I give you the method header. You are to invoke (i.e. call) these methods from your main method.

a) public static void printArray( int [] arr1)
Method receives an array of integers and prints them out on one line separated by a space

b) public static int[] newArrayreversed( int [] arr1)
Method receives an array and RETURNS a REVERSE copy of that array. The main method should print out the returned array

c) public static char initial(String s)
Method receives a String and returns the first character of the String

d) public static int sumEvens(int[] arr1)
Method receives an integer array and return the sum of just the even values in the array

e) public static int sumOddIndexArray(int [] arr1)
Method receives an integer array returns the sum of values at the odd index locations( example sum of arr1[1], arr1[3], arr1[5]...)

Sample output for Part 1:
The array I am using is
0 1 2 3 4 5 6 7 8 9 10

Array that is returned from reverse
10 9 8 7 6 5 4 3 2 1 0

The initial of Joseph is J

The sum of the even values in array is 30

The sum of the values in odd indexes is 25

----jGRASP: operation complete.
Part 2 Lottery practice with Arrays
Write a program that simulates a lottery. Your program should have an array of five integers named lotteryNumbers. Use the Random class to generate a random number in the range of 0 through 9 for each element in that array. Your program should have another array with five integers called user. Write a loop to read 5 integers in from the keyboard to put in user.

The program should then display the count of digits that match between the user array and the lotteryNumbers array.

Here is a sample of the output
Welcome to play Lottery ...
enter your lottery number
3
enter your lottery number
4
enter your lottery number
5
enter your lottery number
6
enter your lottery number
7
The Lottery Number is:
   2 3 8 3 9
Your Number is:
   3 4 5 6 7
There are 1 matching digits.

Hints:
1. Define 2 arrays -
   int [] user = new int [5];
   int [] lottery = new int [5];
2. Declare a variable to count the number of matches
3. Write out prompt to enter numbers
4. Read in numbers in a loop into user array
5. Generate random numbers in a loop into lottery array
6. Print out the contents of both arrays
   example for lottery - include code to print BOTH arrays out
   for(int i=0;i<lottery.length;i++)
      System.out.print(lottery[i] + “ “);
7. Use nested loops to take every number in lottery to compare to every number in user. If
you find a match do these three things:
   a. increment the counter
   b. change the number in the user array so you don’t count it again
   c. break so you don’t look any further

8. Print out number of matches