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Lab Work 2

Q. Read numbers using commandline arguements and identify how many numbers are out of the following.

i). Prime Numbers
ii). Even Numbers

Also print the total numbers entered by the user. Further do not create any new array.

Sol:

```
import java.io.*;

public class primeEvenNumbers {

public static boolean isPrime (int num) {
    int i;
    boolean isPrime;
    isPrime = true;

  for (i = 2; i <= num/2 ; i++) {

    if (num == 0) {
        isPrime = false;
        break;
    };

    if (num %. i == 0) {
        isPrime = false;
        break;
    };
```

```
    }
    return isprime;
}

public static void main (String[] Args) {
    int l;
    l = Args.length;

    if (l > 0) {

        try {
        int i, num, numPrime, numEven;
        numPrime = 0;
        numEven = 0;

        System.out.println("\n Array Input: \n");

        for (i = 0; i < l; i++) {
        num = Integer.parseInt (Args [i]);
        if (isPrime(num)) {
            numPrime++;
        }

        if (num%2 == 0) {
            numEven++;
        }

        System.out.println (num + " ");

    }
```

```
// Num of Prime And Even
System.out.println("\nNumber of Even: " + numEven);

// Num of Prime.
System.out.println("\nNumber of Prime: " + numPrime);

} catch (Exception e) {

// error message
System.out.println("\nError: \n" + e);

}
}
}
```

```
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Array Input:

2
5
8
7
-31
10

Number Of Even: 3

Number Of Prime: 4
```

2Q. Read a string from command line and identify the total number of vowels, consonants numbers and other literals enters by the user. The string could be non-case sensitive.

```
public class VowelsConsonantsInString {

public static void main(String[] Args) {

  int l;
  l = Args[0].length();

  if (l > 0) {

    try {
        char ch;
        int i, numVowels, numConsonant;
        int numSpecial, numNumber;

        numVowels = numConsonants = 0;
        numNumber = numSpecial = 0;

        System.out.println("
            \nInputString: " + Args[0]);

      for (i = 0; i < l; i++) {

        ch = Args[0].toLowerCase().charAt(i);
```

✓11

```
if ((ch >= 'a') && (ch <= 'z')) {

    if ((ch == 'a') || (ch == 'e') ||
        (ch == 'i') || (ch == 'o') || (ch == 'u')) {
    {
        numVowels++;
    }

    else {
        numConsonant++;
    }
}

else if ((ch >= '0') && (ch <= '9')) {
    numNumber++;
}

else {
    numspecial++;
}
}
    system.out.println ("\nVowels: " + numVowels );
    system.out.println ("\nNumbers: " + numNumber);
    system.out.printh ("\nconsonant: " + numConsonant);
    system.out.println ("\nSpecial Character: " + numSpecial);

} catch (Exception e) {
    system.out.println ("\nerror: " + e);
}
}
}
}
```

```
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Input String: hEllo11!!

Number of Vowels: 2

Number of Consonant: 3

Number of Numbers: 2

Number of special characters: 2

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```