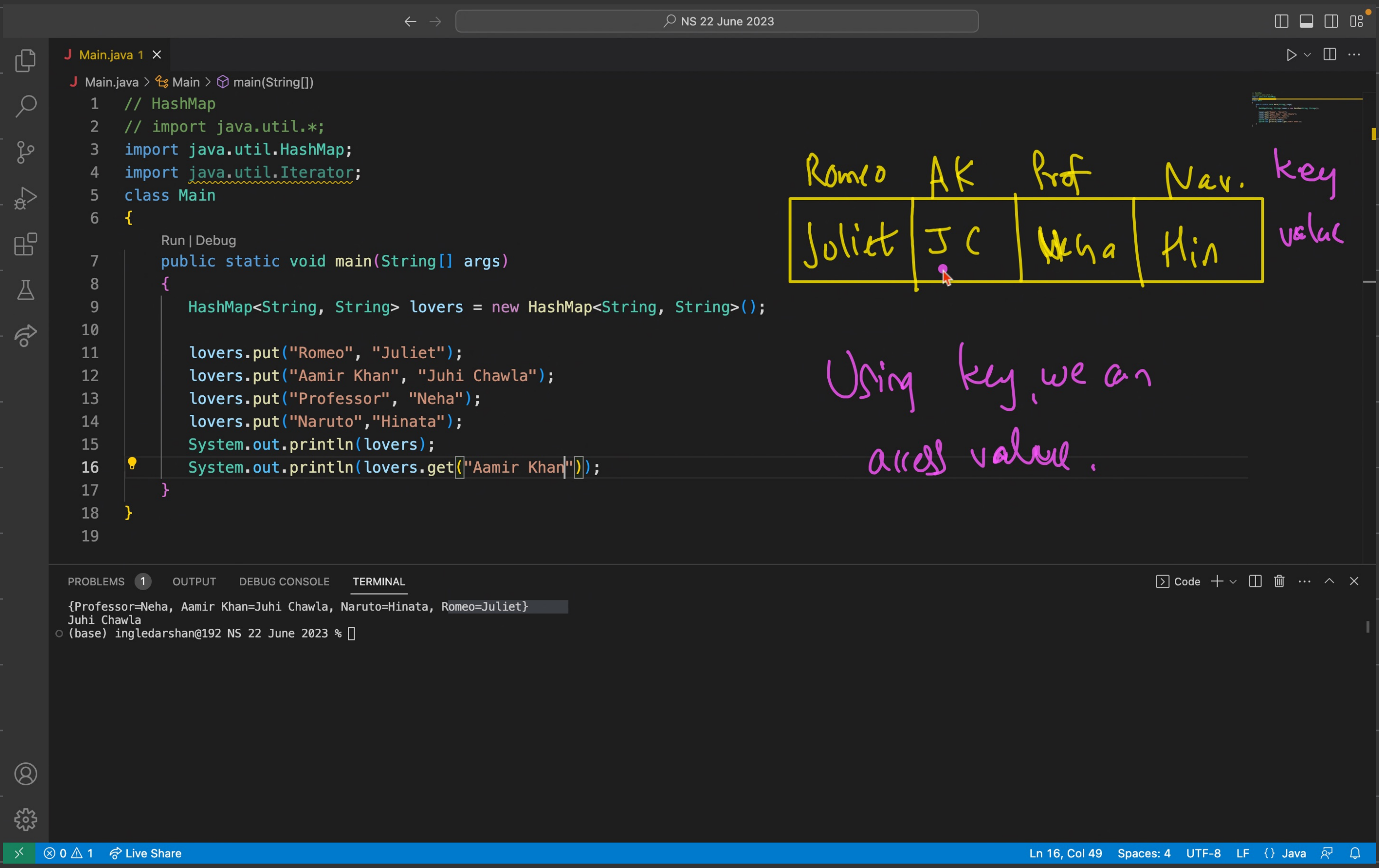
22 June 2023

HashMap:

>HashMap stores items in “key/value” pairs.

>We can access them by index of another type (eg: String)

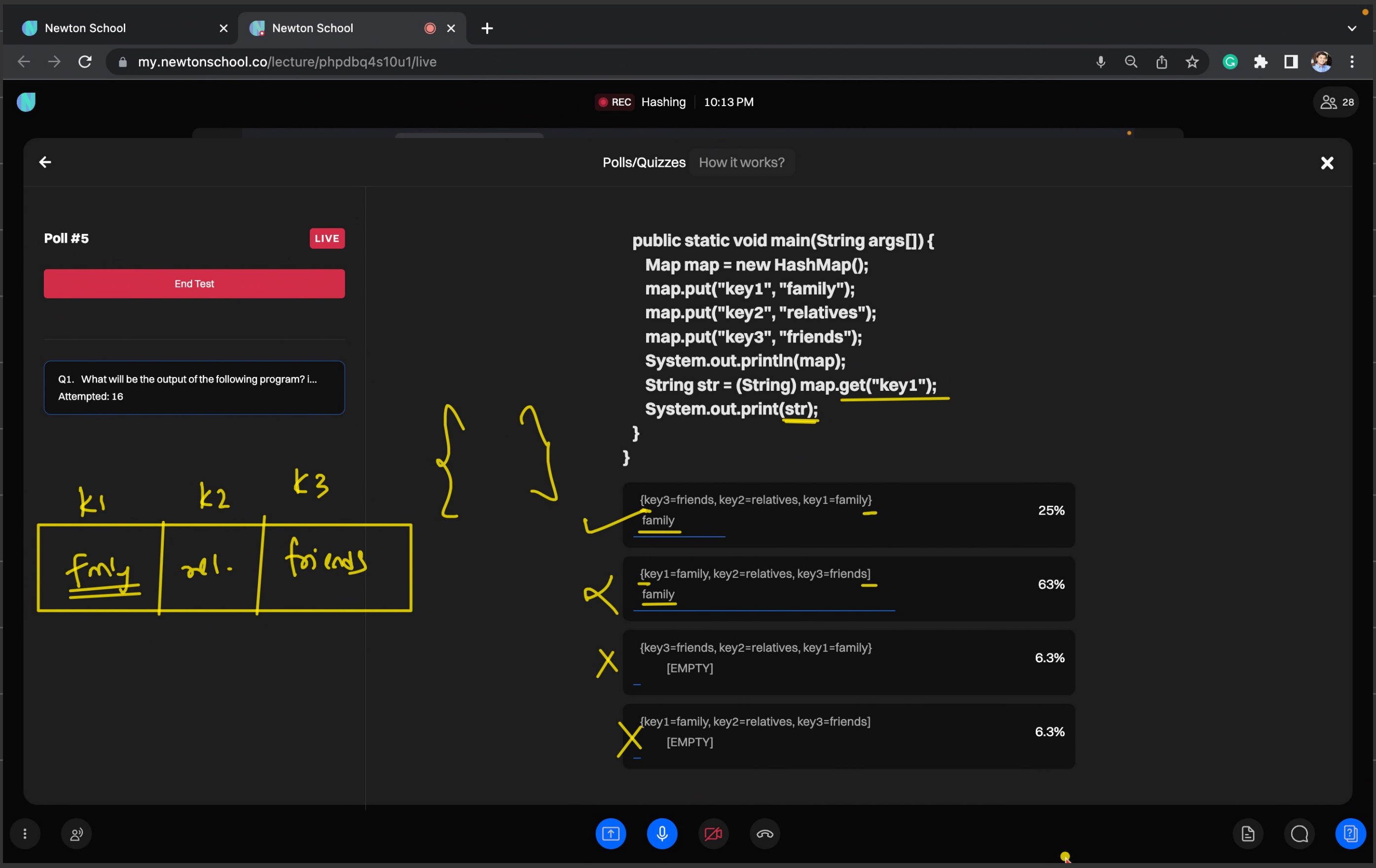


```java
// HashMap
// import java.util.*;
import java.util.HashMap;
import java.util.Iterator;
class Main
{
    public static void main(String[] args)
    {
        HashMap<String, String> lovers = new HashMap<String, String>();

        lovers.put("Romeo", "Juliet");
        lovers.put("Aamir Khan", "Juhi Chawla");
        lovers.put("Professor", "Neha");
        lovers.put("Naruto","Hinata");
        System.out.println(lovers);
        System.out.println(lovers.get("Aamir Khan"));
    }
}
```

Using key, we can access value.

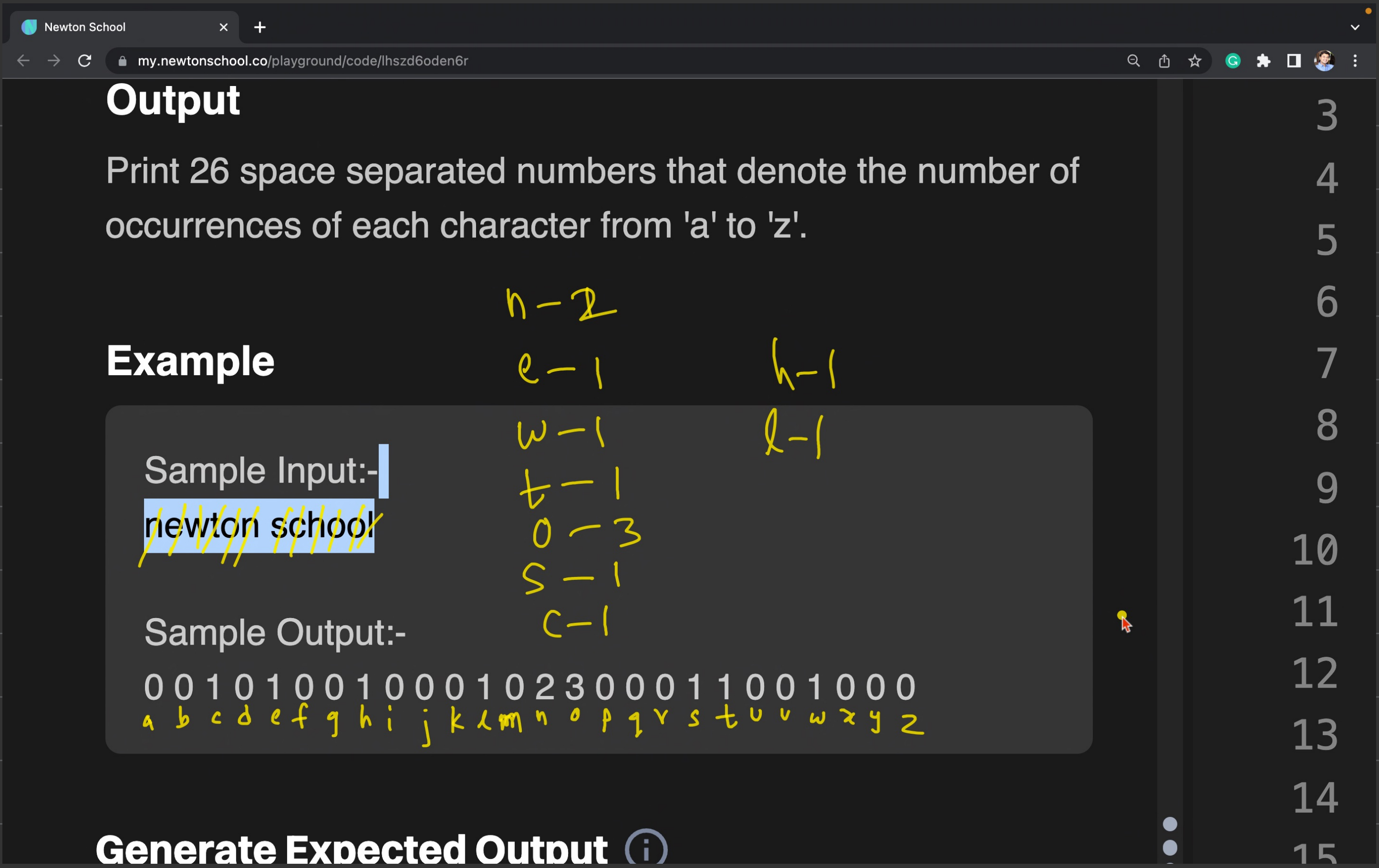
```
{Professor=Neha, Aamir Khan=Juhi Chawla, Naruto=Hinata, Romeo=Juliet}
Juhi Chawla
(base) ingledarshan@192 NS 22 June 2023 %
```



Q1. What will be the output of the following program? i...
Attempted: 16

```java
public static void main(String args[]) {
   Map map = new HashMap();
   map.put("key1", "family");
   map.put("key2", "relatives");
   map.put("key3", "friends");
   System.out.println(map);
   String str = (String) map.get("key1");
   System.out.print(str);
 }
}
```

✓ {key3=friends, key2=relatives, key1=family} family	25%
✗ {key1=family, key2=relatives, key3=friends] family	63%
✗ {key3=friends, key2=relatives, key1=family} [EMPTY]	6.3%
✗ {key1=family, key2=relatives, key3=friends] [EMPTY]	6.3%



Newton School
my.newtonschool.co/playground/code/lhszd6oden6r

Output

Print 26 space separated numbers that denote the number of occurrences of each character from 'a' to 'z'.

Example

Sample Input:-

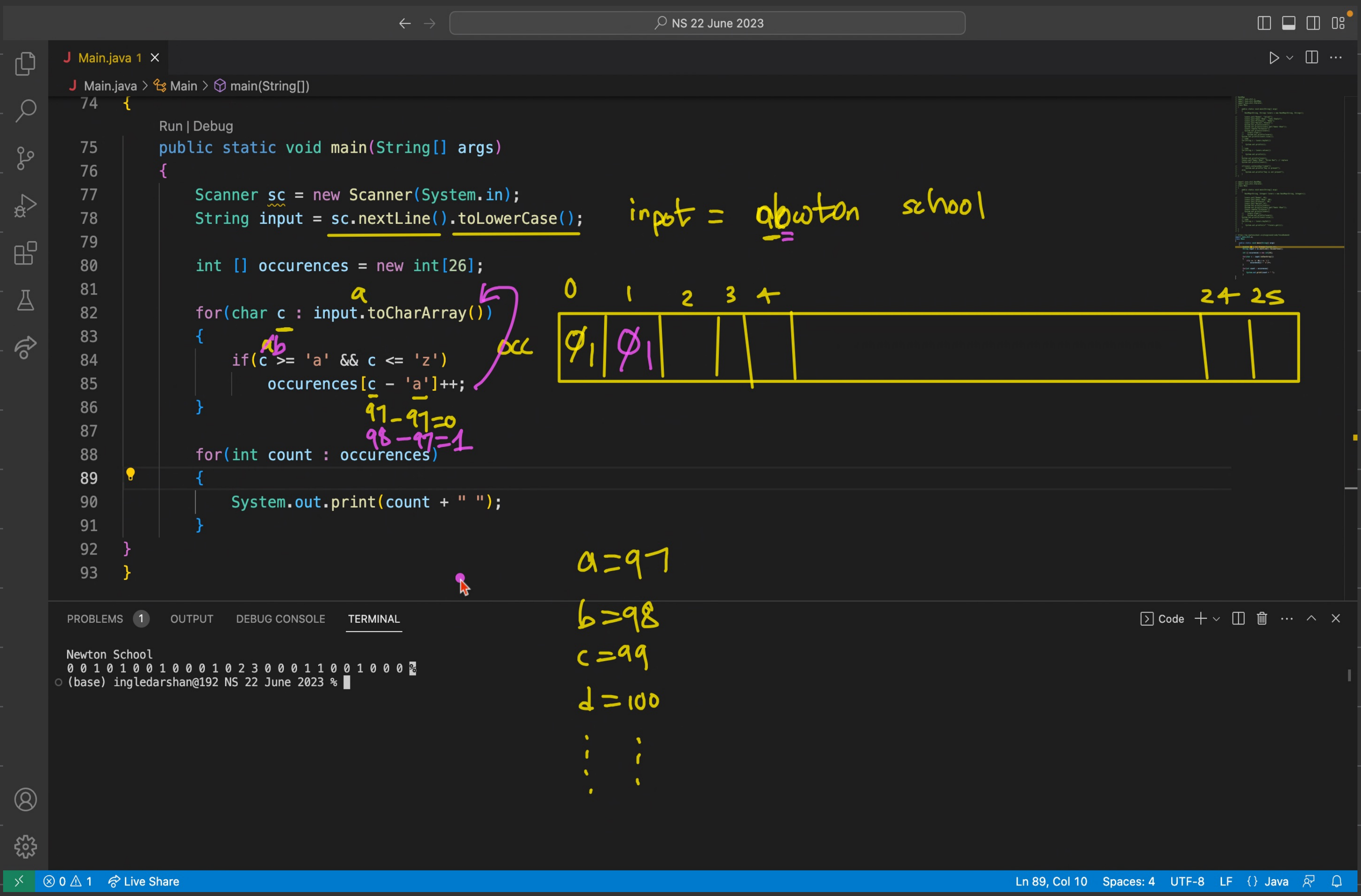
newton school

Sample Output:-

```
0 0 1 0 1 0 0 1 0 0 0 1 0 2 3 0 0 0 1 1 0 0 1 0 0 0
```

n-2
e-1
w-1
t-1
o-3
s-1
c-1
h-1
l-1
a b c d e f g h i j k l m n o p q r s t u v w x y z

Generate Expected Output



```java
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        String input = sc.nextLine().toLowerCase();

        int [] occurences = new int[26];

        for(char c : input.toCharArray())
        {
            if(c >= 'a' && c <= 'z')
                occurences[c - 'a']++;
        }

        for(int count : occurences)
        {
            System.out.print(count + " ");
        }
    }
}
```

```
Newton School
0 0 1 0 1 0 0 1 0 0 0 1 0 2 3 0 0 0 1 1 0 0 1 0 0 0 %
(base) ingledarshan@192 NS 22 June 2023 %
```