

Day 10 12-4-23  
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1.

```
import java.util.*;
import java.util.regex.*;
public class Main
{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String ip=sc.next();
        String zeroTo255 = "(\\d{1,2}|(0|1)\\d)" + "\\d{2}|2[0-4]\\d|25[0-5]";
        String regex= zeroTo255 + "\\." + zeroTo255 + "\\." + zeroTo255 + "\\." +
zeroTo255;
        Pattern p = Pattern.compile(regex);
        Matcher m = p.matcher(ip);
        if(m.matches())
            System.out.println("IP address "+ip+" is Valid");
        else
            System.out.println("IP address "+ip+" is Invalid");
    }
}
```

2.

```
import java.util.*;
import java.util.regex.*;
public class Main
{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String s=sc.next();
        Pattern p = Pattern.compile("\\b\\w*g\\w*\\b");
        Matcher m = p.matcher(s);
        if(m.matches())
            System.out.println("Valid");
        else
            System.out.println("Invalid");
    }
}
```

3.

```
import java.util.Scanner;
```

```

import java.util.regex.*;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the IP address: ");
        String ipAddress = sc.nextLine();

        String pattern = "(\\b|\\.)(0+)(\\d)";

        // Create a Pattern object
        Pattern r = Pattern.compile(pattern);

        // Create a Matcher object
        Matcher m = r.matcher(ipAddress);

        // Replace leading zeros with an empty string
        String result = m.replaceAll("$1$3");

        System.out.println("Original IP address: " + ipAddress);
        System.out.println("IP address without leading zeros: " + result);

    }
}

```

4.

```

import java.util.Scanner;
import java.util.regex.*;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String n = sc.nextLine();

        String pattern = "\\.(\\d+)$";

        Pattern r = Pattern.compile(pattern);

        Matcher m = r.matcher(n);
        int c=0;
        while(m.find()){
            String s=m.group(1);

```

```

        System.out.println(s.length());
    }

}
}
5.
import java.util.Scanner;
import java.util.regex.Matcher;
import java.util.regex.Pattern;

public class Main {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String s= sc.nextLine();
        System.out.println("Original String: " + s);
        System.out.println("Separate consonants and vowels of the said string: " + separate(s));
    }

    public static String separate(String str) {
        Pattern vowelPattern = Pattern.compile("[aeiouAEIOU]");
        Matcher matcher = vowelPattern.matcher(str);
        String vowels = "";
        while (matcher.find()) {
            vowels += matcher.group();
        }
        String consonants = str.replaceAll("[aeiouAEIOU]", "");
        return consonants + vowels;
    }
}

```