

**16TIN2054 – Teknik Pemrograman**  
**(tugas)**

diajukan untuk memenuhi salah satu syarat untuk menyelesaikan tugas mata kuliah Teknik Pemrograman pada program studi D4 Teknik Informatika Tahun Pelajaran 2020/2021



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**PROGRAM STUDI D4 TEKNIK INFORMATIKA**  
**JURUSAN TEKNIK KOMPUTER DAN INFORMATIKA**  
**POLITEKNIK NEGERI BANDUNG**  
**2020/2021**

## CountLetters.java

```
// *****
// CountLetters.java

//
// Reads a words from the standard input and prints the number of
// occurrences of each letter in that word.
//
// *****
package count;

import java.util.Scanner;

public class CountLetters{
    public static void main(String[] args){
        int[] counts = new int[26];
        Scanner scan = new Scanner(System.in);

        //get word from user
        System.out.print("Enter a single word (letters only, please): ");
        String word = scan.nextLine();

        //convert to all upper case
        word = word.toUpperCase();

        //count frequency of each letter in string
        for (int i=0; i < word.length(); i++)
            try {
                counts[word.charAt(i)-'A']++;
            } catch (Exception ex) {
                System.err.println("not a letter: \" " +word.charAt(i) + "
\\");
            }

        //print frequencies
        System.out.println();
        for (int i=0; i < counts.length; i++)
            if (counts [i] != 0)
                System.out.println((char)(i +'A') + ": " + counts[i]);
    }
}
```

## ParseInts.java

```
// *****  
// ParseInts.java  
//  
// Reads a line of text and prints the integers in the line.  
//  
// *****  
package exception;  
import java.util.Scanner;  
public class ParseInts{  
    public static void main(String[] args){  
        int val, sum=0;  
        Scanner scan = new Scanner(System.in);  
        String line;  
        System.out.println("Enter a line of text");  
        Scanner scanLine = new Scanner(scan.nextLine());  
  
        while (scanLine.hasNext())  
        {  
            try  
            {  
                val= Integer.parseInt(scanLine.next());  
                sum+= val;  
            }  
            catch(Exception e){}  
        }  
        System.out.println("The sum of the integers on this line is "+ sum);  
    }  
}
```

## Factorials.java

```
package Factorials;
// *****
// Factorials.java
// Reads integers from the user and prints the factorial of each.
//
// *****
import java.util.Scanner;

public class Factorials
{
    public static void main(String[] args)
    {
        String keepGoing = "y";
        @SuppressWarnings("resource")
        Scanner scan = new Scanner(System.in);
        while (keepGoing.equalsIgnoreCase("Y"))
        {
            System.out.print("Enter an integer: ");
            int val = scan.nextInt();
            //awesome additions by eddie
            try {
                System.out.println("Factorial(" + val + ") = "
                                   + MathUtils.factorial(val));

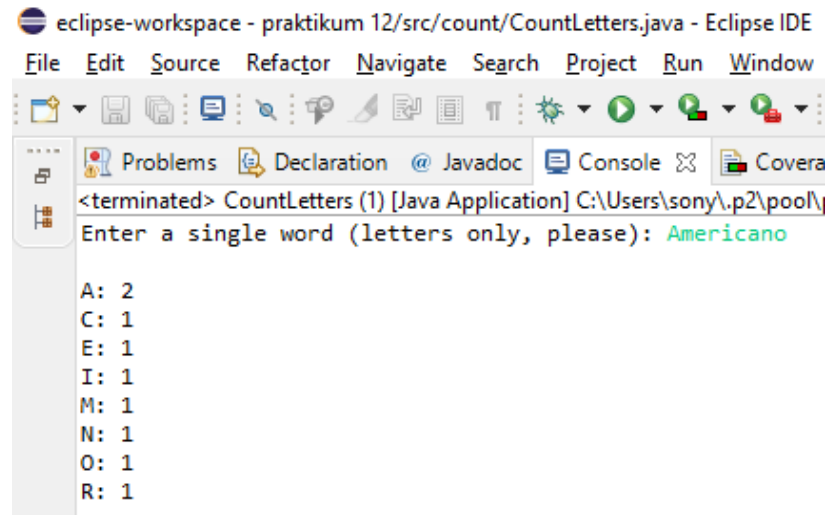
                //more awesome additions by eddie
            } catch (IllegalArgumentException ex) {
                System.err.println(ex + "\n");
            }
            System.out.println("Another factorial? (y/n) ");
            keepGoing = scan.next();
        }
    }
}
```

## MathUtils

```
// *****  
// MathUtils.java  
//  
// Provides static mathematical utility functions.  
//  
// *****  
package Factorials;  
public class MathUtils{  
//-----  
// Returns the factorial of the argument given  
//-----  
public static int factorial(int n)throws IllegalArgumentException{  
    if(n < 0) {  
        throw new IllegalArgumentException (n + " Tidak bisa difaktorkan");  
    }  
    else if(n > 16) {  
        throw new IllegalArgumentException (n + " Kelebihan");  
    }  
    int fac = 1;  
    for (int i=n; i>0; i--)  
        fac *= i;  
    return fac;  
}  
}
```

## Hasil Screen Shoot

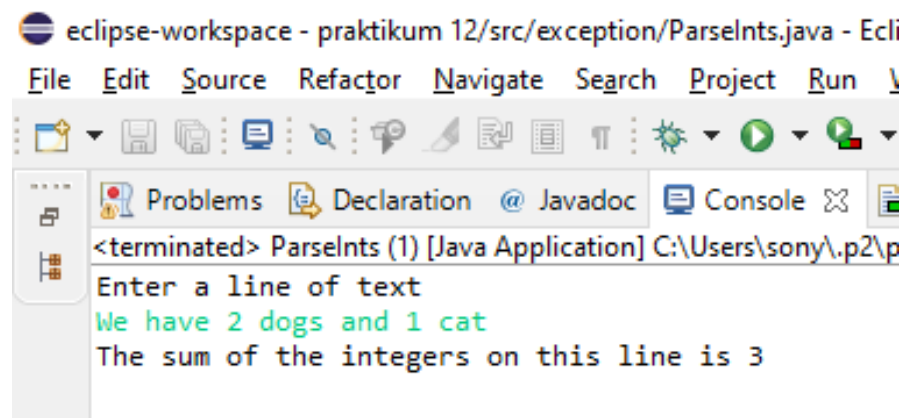
### CountLetters.java



```
eclipse-workspace - praktikum 12/src/count/CountLetters.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window
<terminated> CountLetters (1) [Java Application] C:\Users\sony\.p2\pool\y
Enter a single word (letters only, please): Americano

A: 2
C: 1
E: 1
I: 1
M: 1
N: 1
O: 1
R: 1
```

### ParseInts.java



```
eclipse-workspace - praktikum 12/src/exception/ParseInts.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window
<terminated> ParseInts (1) [Java Application] C:\Users\sony\.p2\pool\p
Enter a line of text
We have 2 dogs and 1 cat
The sum of the integers on this line is 3
```

### MathUtils.java

eclipse-workspace - praktikum 12/src/Factorials/Factorials.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Problems Declaration @ Javadoc Console Coverage

Factorials [Java Application] C:\Users\sony\.p2\pool\plugins\org.eclipse.justj.openjc

```
Enter an integer: 1
Factorial(1) = 1
Another factorial? (y/n)
y
Enter an integer: -2
java.lang.IllegalArgumentException: -2 Tidak bisa difaktorkan
Another factorial? (y/n)
y
Enter an integer: 18
java.lang.IllegalArgumentException: 18 Kelebihan
Another factorial? (y/n)
```