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The purpose of this code is to read an input file for the grades numbers

and produce various information from that.

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import java.io.\*;

import java.util.InputMismatchException;

import java.util.Scanner;

public class GradesStatistics

{

public static void main(String[] args)

{

//Create object to store File object and use scanner to read

     Scanner scan = new Scanner(System.in);

     System.out.print("Enter the name of the file to read: ");

String fileName = scan.next();

System.out.println();

// Create File object

File input\_File = new File(fileName);

try{

Scanner file1 = new Scanner(input\_File);

int students = 0, sum = 0, min = Integer.MAX\_VALUE, max = Integer.MIN\_VALUE, next, A = 0, B = 0, C = 0, D = 0, F = 0;

//Take in the sum and number of students, count A, B, C, D, and F students, and compute minimum and maximum

while (file1.hasNext())

{

try{

next = file1.nextInt();

sum += next;

students++;

if (next < min)

min = next;

if (next > max)

max = next;

if (next >= 90)

A++;

else if (next >= 80)

B++;

else if (next >= 70)

C++;

else if (next >= 60)

D++;

else if (next < 60)

F++;

} catch ( InputMismatchException e ){

System.out.println( "==============ERROR============="

+ "\nAll the inputs must be numbers!"

+ "\n================================");

file1.next();

}

}

//Compute average and number of people who passed

double average = (double) sum/students;

int passed = A + B + C + D;

// Create FileOutputStream object.

FileOutputStream fos = new FileOutputStream("gradeStatisticsOutput.txt", false);

PrintWriter pw = new PrintWriter(fos);

// Write data to the file

pw.println( "Number of Students: " + students );

pw.println( "Average Grades: " + average );

pw.println( "Highest Grade: " + max );

pw.println("Lowest Grade: " + min );

pw.println("The number of students who passed: " + passed);

pw.println("The number of students who got an A: " + A);

pw.println("The number of students who got an B: " + B);

pw.println("The number of students who got an C: " + C);

pw.println("The number of students who got an D: " + D);

pw.println("The number of students who got an F: " + F);

// release the resources associated with gradeStatisticsOutput.txt

pw.close();

//Output computations

System.out.println("The total amount of students is " + students);

System.out.println("The average of all the grades is " + average);

System.out.println("The highest grade is " + max);

System.out.println("The lowest grade is " + min);

System.out.println("The number of students who passed is " + passed);

System.out.println("The number of students who got an A is " + A);

System.out.println("The number of students who got an B is " + B);

System.out.println("The number of students who got an C is " + C);

System.out.println("The number of students who got an D is " + D);

System.out.println("The number of students who got an F is " + F);

} catch ( FileNotFoundException fnf ){

System.out.println("\n==============ERROR============="

+ "\nCannot find the file you entered!"

+ "\n================================\n");

}

}

}

**No Exception:**

Enter the name of the file to read: grades.txt

The total amount of students is 19

The average of all the grades is 85.21052631578948

The highest grade is 99

The lowest grade is 56

The number of students who passed is 18

The number of students who got an A is 8

The number of students who got an B is 4

The number of students who got an C is 6

The number of students who got a D is 0

The number of students who got an F is 1

**FileNotFoundException:**

Enter the name of the file to read: da.txt

==============ERROR=============

Cannot find the file you entered!

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**InputMismatchException:**

Enter the name of the file to read: grades1.txt

==============ERROR=============

All the inputs must be numbers!

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The total amount of students is 19

The average of all the grades is 85.21052631578948

The highest grade is 99

The lowest grade is 56

The number of students who passed is 18

The number of students who got an A is 8

The number of students who got an B is 4

The number of students who got an C is 6

The number of students who got a D is 0

The number of students who got an F is 1

