

Program 4d
COP-2250 - Java Programming 1
Professor : Michael Robinson
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NOTE : LATE PROGRAM WILL NOT BE ACCEPTED *****

Turn in the signed source code on paper, and email me the source code.

Make sure the program is properly documented and aligned uniformly, looking professionally, I will take points off if it not.

Include the following header in every program:

```
/******  
Author      : Your Name  
Course      : COP 2250 DAYS AND TIMES  
Professor   : Michael Robinson  
Program #   : Program Purpose/Description  
             {A brief description of the program }  
Due Date    : MM/DD/YYYY
```

Certification:

I hereby certify that this work is my own and none of it is the work of any other person.

.....{ your signature }.....

```
*****/
```

Purpose of this program:

- Implement:
 - Open, read and process text files
 - Store data in an array, an ArrayList or a String variable, your choice
 - Use many methods from the String class
 - Use for and while loops
 - Use DecimalFormat class
 - Do math computations with the data contents
 - Use if and if else statements
 - Compare characters
- Implement arrayList
- Implement wrappers
- More files

How:

**** NOTE ****

Each task must be done inside its own method.

Use main ONLY to create variables and call the methods.

From main() call methods passing parameters where you will implement the following:

Worth 3 points

- Download the file following DNA file from:
<http://users.cis.fiu.edu/~mrobi002/downloads/samples/1200.dna>
 - Open the previous file.
 - Load it into a one dimension array, an ArrayList or a String, your choice.
This file contains nueclotides/bases/letters in it such as a, c, g, and t, others.
 - Find out the total amount of EACH nueclotide. e.i. how many a, how many c, how many g, how many t, and how many ALL OTHERS are in this file.
Make sure to test for upper and lower cases of each character.
 - Print the first and the last nueclotide in the file.
 - Using the ceil() method print the base exactly in the middle of the file.
 - Print all totals in an aligned column using the numeric format e.i. 1,234,567

Worth 1 points

- Create an arrayList, add OBJECTS in the first five locations
- Using iterators print all OBJECTS in the arrayList
- Delete OBJECTS in locations/indexes 2 and 4 from the arrayList
- Using a for loop print all OBJECTS left in the arrayList

Worth 1 point (wrappers)

- create an int with a value of your choice
- create an Integer with a value of your choice
- create a String with a numeric value of your choice
- convert the String to int
- add all previous numbers, the int, the Integer, and the Converted value in the String
- print all values including the total, using descriptive labels

Worth 3 points

- Download files: <http://users.cis.fiu.edu/~mrobi002/downloads/samples/studentsID.txt>
and: <http://users.cis.fiu.edu/~mrobi002/downloads/samples/studentsInfo.txt>
- Open both files as READ
These files have the same amount of records. The data in each row/record from one file corresponds to the same row/record in the other file.
- Create a new file named "students.txt"
- Read each record from the downloaded files
- Append each record read creating a new record and write this new record to the new file you created.
- Close all files.
- Open "students.txt" and display all records in it using printf in aligned columns.

EXTRA CREDITS:

Worth 2 points

- Use GUI Message and Input Dialog Boxes for all communications with the user

Worth 2 points

- Create a file called pgm4.txt
- Using a while loop, write the square of all integer numbers from 0 to 10
"make the program calculate the squares"
- close the file
- Reopen file
- Read all data in the file adding the square root of each number.
- Print the total amount
- close the file