

COP 2250 Java Programming FLAME - project 1 : cop2250pgm1aFLAME

Professor: Michael Robinson
e-mail : michael.robinson@fiu.edu
Web Page : www.cs.fiu.edu/~mrobi002/teaching

- Program must be named: yourLastNameFirstLetterOfYourFirstNamepgm1.java
- 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 time  
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 }.....  
*****/
```

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 project:

- Using Eclipse/Netbeans create first project, first class, and first java program
- Use multiple variables of Primitive Data Types and the String Class by declaring them, and assigning values to them in the main method.
- Create some methods that accept, and others do not accept parameters. (MAKE SURE THE METHODS NAMES DESCRIBE WHAT THEY DO example: addNumbers)
- Inside the methods do calculations when needed and print results.
- Use print, println, and printf.
- Use \n and \t
- Use remarks to document your program.
- Use for and while loops
- Two dimension arrays

How:

1 - Worth 1 point

- In the main method, using the proper Primitive Data Types,
 - Create the following variables with the following values:

Data Type	Variable Name	Variable Contents
???	myName	= place your name here
???	creditsTaken	= place your credits taken this semester
???	totalCredits	= place your total amount of credits taken
???	GPA	= place your current GPA
???	major	= place your major
???	className	= place the name of this class

- Call a method named myInfo PASSING the previous variables
- Create the following variable with the following value:

Data Type	Variable Name	Variable Contents
???	maxValue	= 100

- Call the following methods PASSING the maxValue variable
 - addNumbers
 - subtractNumbers
 - multiplyNumbers
 - divideNumbers
 - modNumbers

2 - Worth 1 point

- Create the following methods ACCEPTING their corresponding data variables
 - myInfo
 - addNumbers
 - subtractNumbers
 - multiplyNumbers
 - divideNumbers
 - modNumbers

3 - Worth 1 point

- In the myInfo method, using the System.out.printf and \n commands print the information send from the main method and received by this method e.i.

```
Hi my name is ..,  
my major is ..,  
I have completed .. credits,  
I am taking .. credits,  
This class's name is ..
```

- In the addNumbers method, using the System.out.print and \n commands print the following computations: (make sure your program does the computations)

```
maxValue + 1 = ??  
maxValue + 2 = ??
```

- In the subtractNumbers method, using the System.out.print and \t commands print the following computations: (make sure your program does the computations)

```
maxValue - 1 = ??  
maxValue - 2 = ??
```

- In the multiplyNumbers method, using the System.out.println command print the following computations: (make sure your program does the computations)

```
maxValue * 1 = ??  
maxValue * 2 = ??
```

- In the divideNumbers method, using the System.out.printf command ONLY print the following computations: (make sure your program does the computations)

```
maxValue / 1 = ??  
maxValue / 2 = ??
```

- In the modNumbers method, using the System.out.print command ONLY print the following computations: (make sure your program does the computations)

```
maxValue % 1 = ??  
maxValue % 2 = ??
```

4 - Worth 1 point

- From the main method call a method named sumOfDigits(), without passing any parameters
- Create a method named sumOfDigits()
- In the sumOfDigits() method declare the variable N of type int
- Assign the value 100 to the variable N.
- Using the sum of digits formula: $(1 + N) * (N/2)$
print the total amount of the sum of digits from 1 to 100

The formula $(1 + N) * (N/2)$ will calculate
the sum of all the numbers from 1 to 100 $(1 + 2 + 3 + 4 + \dots + 100)$,
The formula is: (1 plus N) times (N divided by 2).

5 - Worth 1 point

- From the main method call a method named forLoop(), without passing any parameters
- Create a method named forLoop()
- In the forLoop() method declare the variable total of type int
- Using a for loop to the variable total, add the sum of all numbers from 1 to 100
- Use the System.out.printf and \n commands to print the variable total

6 - Worth 1 point

- From main call a method called array2D passing two ints of value 10 and 10 (row, col)

- Create the array2D method accepting the two int variables
- Create a 2 dimensional array of ints with the values received (row, col)
- Load each index in the array with the sum of the location of each index ex: (row + col)
- While you load the array display it forming a perfect square, also all values
- Write the total of the sum of all values in the array !!!! ONCE !!!!

7 - Worth 1 points

- From main call a method called reversedEven accepting a String variable
- Create the reversedEven method accepting a String
- Using a while loop display in REVERSE order the chars located in the String even locations

8 - Worth 1 points

- From main call a method called reversedEven accepting a String variable
- Create the reversedEven method accepting a String
- Using a for loop display in REVERSE order the chars located in the String even locations