**Lab 7 Pre-Lab**

***Lab Quiz***

*There will be a lab quiz at the beginning of lab this week. You will be given a class diagram of a class with one method that you will need to create. You will then need to create a tester class to call the method and print the results. You may use a reference sheet (8.5 x 11 both sides). You may NOT look at your textbook. You may NOT look at any other projects in Eclipse or use any other applications. You are NOT allowed to access the Internet.*

**The following exercises must be completed before you come to lab. Your instructor will check your pre-lab exercises at the beginning of the lab period. Completion of the pre-lab is worth 10 points of the total 50 points for the lab.**

**Part 2 (Part 1 in the lab does not have a pre-lab activity.)**

*Write the pseudocode and create test data for a method to determine if a number is positive, negative, or zero.*

* ASK the user to input any number.
* THEN, the number is compared against zero or if it is smaller than zero by using conditional operators.
* IF, the number is positive then it is checked if the number is greater than zero.
* ELSE, if it is smaller than Zero then it’s a negative number.
* ENTERED number is checked if the number is equal to 0 by using the if and conditional operator.

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| --- | --- |
| **number** | **result** |
| 12 | Number is positive |
| 0 | Number is Zero |
| -12 | Number is negative |

**Part 3**

*Write the pseudocode for the following methods in the Person class. See the lab for the class diagram and method descriptions*

* FIRST, we would declare four instance variables of the type String.
* VARIABLES, are initialized by using a constructor with three parameters.
* ONCE, the string literals are checked against the input by using if else are evaluated to boolean i.e. whether they are true or False.
* IF, the input is “M” OR “S” for married and M for male then it evaluates to true and thus the person is married and is a male and Mr. will be prefixed in front his name.
* OTHERWISE, it evaluates to False and outputs invalid gender or status.
* ELSE IF, then the person is female i.e. “F” and married “M” then the input is still valid i.e. true and the program prefix Mrs. in front of the name.
* OR, if its female “F” and single “S” then the input is still true i.e. valid and the program prefix Miss in front of the name.
* OTHERWISE, it evaluates to False and outputs invalid gender or marital status.
* determineTitle

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| --- | --- | --- |
| **gender** | **maritalStatus** | **result** |
| F | M | Mrs. Jane Doe , F, M |
| F | S | Miss Jane Doe , F, S |
| M | S or M | Mr. John Doe, M , M  And M, S |

* isValidGender

|  |  |
| --- | --- |
| **gender** | **result** |
| M | Valid gender : M |
| F | Valid Gender: F |

* isValidMaritalStatus

|  |  |
| --- | --- |
| **maritalStatus** | **result** |
| M | Valid marital status: M |
| S | Valid marital status: S |