**::CIS 25 Fall 2016:: Assignment 7 Logical Operators**

**Student ID:**

**Logical Operators**

Logical Operators connect two or more boolean expressions.

**||-** Logical Or. In order for the Or operator to True, only one of its entries must be true.

**&& -** Logical And. In order for the And operator to True, all of its entries must be true.

**Difference between & and &&?**

**Logic Table - complete logic tables below.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **P** | **Q** | **P && Q** | **P || Q** | **!P** |
| **FALSE** | **FALSE** | False | False | True |
| **TRUE** | **FALSE** | False | True | False |
| **FALSE** | **TRUE** | False | True | True |
| **TRUE** | **TRUE** | True | True | False |

**+**

|  |  |  |
| --- | --- | --- |
| **P** | **Q** | **(!(P)) || (Q)** |
| **FALSE** | **FALSE** | True |
| **TRUE** | **FALSE** | False |
| **FALSE** | **TRUE** | True |
| **TRUE** | **TRUE** | True |

|  |  |  |
| --- | --- | --- |
| **P** | **Q** | **~(P && Q) && (P&&Q)** |
| **FALSE** | **FALSE** | False |
| **TRUE** | **FALSE** | False |
| **FALSE** | **TRUE** | False |
| **TRUE** | **TRUE** | False |

|  |  |  |
| --- | --- | --- |
| **P** | **Q** | **~(P ||Q) || (P&&Q)** |
| **FALSE** | **FALSE** | True |
| **TRUE** | **FALSE** | False |
| **FALSE** | **TRUE** | False |
| **TRUE** | **TRUE** | True |

**LAB ASSIGNMENT**

**1st Task:** Using **If** and **else** ladder. Write a program that computes a single filer’s income tax burden.

|  |  |
| --- | --- |
| **TAX RATE** | **Single Filers Income** |
| 10% | Up to $6000 |
| 15% | $6,001 - $27,950 |
| 27% | $27,951 - $67,700 |
| 30% | $67,701 - $141,250 |
| 35% | $141,251 - $307,050 |
| 38.6% | $307, 051 or more |

The user should be able input her Income.

Please create a whiteboard or pseduecode process. **Attach a Snipping Photo Below**



**Sample Output- //**Output should include income tax.

Optional… (Look for ways to round output)

Income tax for a single person making $85000.00 is $25500.00

**Sample Output 2-**

Income tax for a single person making $9800.00 is $1470.00

