

CST8110 – Introduction to Programming

Assignment #1 – Arithmetic/Problem Solving

DUE: FRIDAY OCTOBER 4th at 6pm SHARP – see submission instructions below. Late submissions receive a grade of 0.

Problem Description:

Generate for the following problem:

- a) test plan AND
 - b) write and test the program code in Java.
- This problem will simulate producing a very basic invoice for a Internet Providing company (ie a company that provides Internet connection and services). Devise a name for your company, and use it in the first line of display from the program. (see example
 - We will use this problem in subsequent assignments and will build functionality as we progress. For now, the invoice will only handle one month bill for a client.
 - The program should ask for the total amount of bandwidth in Gigabits to be purchased for the month.
 - The program should calculate the Invoice Amount – which will be a flat rate of \$50.00 per month plus the number of Gigabits in the month multiplied by \$1.25 per Gigabit.
 - The program should calculate and display the Sales Tax (13% of the Invoice Amount) and the total amount due (ie Invoice Amount + Sales Tax).
 - Your code does NOT need to worry about formatting the output – specifically numbers to two decimal places, etc. YET....that will come later. For those who wish, the last slide in the Introduction to Java Lecture notes shows you one way to do this.
 - Your code also does NOT (YET) need to worry if the user inputs an invalid value for either of the inputs (example negative number or character). We will implement this in a future assignment.

Sample Output #1: (red indicate user entered, blue is displayed by the program)

```
Welcome to the Crane ISP Company
Please enter the total number of Gigabit you wish to purchase: 0
Invoice Amount : $ 50.00
Sales Tax:      $ 6.50
Total Due:      $ 56.50
```

Sample Output #2: (red indicate user entered, blue displayed by program)

```
Welcome to the Crane ISP Company
Please enter the total number of Gigabit you wish to purchase: 10
Invoice Amount : $ 62.50
Sales Tax:      $ 8.13
Total Due:      $ 70.63
```

Submission Requirements:

- You must create a .zip file that contains ONLY the following:
 - o Your program code – named Assign1.java – (with your name, section, lab teacher listed in comments in the header of the program)
 - o Your compiled code – Assign1.class
 - o A document created with either Notepad, Wordpad or Word named Assign1.docx or Assign1.txt with your test plan – note this should contain your name, section and lab teacher listed at the top.
- The .zip file must have the following as it's name
 - o Your last name, your first name, the word assign and the assign number Example CraneLindaAssign1.zip
- Submit the .zip file through the Assignment feature which has been enabled in the CST8110 Blackboard course. This should be directly under the Assignment

description.

- Marks will be given for correct submission (ie marks will be deducted for incorrect submission!)