1. Write a program that read a positive integer and then finds the smallest power of two that is greater than or equal to the number that was read. For example, if the program reads the value 32 it should note that 32 = 2 5 is the smallest power of two greater than or equal to 32.

**Also submit either a flowchart or pseudo-code**.

Save your file as ALoop1\_yourName

1. Write a Java program that inputs one or more integer numbers. The number of numbers is not known ahead of time so after entering each number, you should ask the user if he or she wants to enter another number. The program should calculate and display both the total and the average of the numbers entered. It should also find and display the value of the largest and smallest number entered.

Due Monday Nov 11, 2013

File Name: Aloop2\_yourName

1. Orion Entertainment sells CD's for $13.99 and DVD's for $19.99. If the total number of

items purchased by a customer is 10 or more, the customer receives a 10% discount on his

or her entire purchase. HST (13%) is then added to the price after the discount to calculate

the total price.

Write a Java program that produces a bill for each customer. After asking how many

CD's and DVD's are being purchased, the program should display a bill that shows the

number and value of the CDs and DVD's purchased, the amount of the discount (if any), the

total before tax, the HST and the total amount of the purchase.

Your program should be able to handle more than one customer. After all of the

purchases have been made, the program should give a summary of the day's sales showing

the total number of customers and the total overall sales.

To make your program easier to update, the prices, rate of discount and the tax rate

should be stored as constants (final) defined at the beginning of the program. For example:

final double CD\_PRICE = 13.99; **submit either a flowchart or pseudo-code TODAY**