INF 2105: SOFTWARE APPLICATION DEVELOPMENT PRACTICAL SESSION

PRACTICAL SESSION 3

1. Write a program to prompt the user for hours and rate per hour to compute gross pay.
   Note: Gross pay =hours worked times rate per hours
   Sample output:
   Enter Hours: 35
   Enter Rate: 2.75
   Pay: 96.25
2. Write a program which prompts the user for a Celsius temperature, convert the temperature to Fahrenheit, and print out the converted temperature.

3. Two points in a plane are specified using the coordinates (x1,y1) and (x2,y2). Write a program that calculates the slope of a line through two (non-vertical) points entered by the user

   $m = \frac{y2 - y1}{x2 - x1}$
4. Write a program that accepts two points (see previous problem 4) and determines the distance between

   them. $d = \sqrt{(x2 - x1)^2 + (y2 - y1)^2}$

5. Write a program to calculate the area of a triangle given the length of its three sides a, b, and c.

   $s = \frac{a + b + c}{2}$ $A = \sqrt{s(s-a)(s-b)(s-c)}$

6. Write a program that allow the user to input two integer values and then the program prints the results of adding, subtracting, multiplying, and dividing among the two values.
   Test your program with the following input:

   Enter value a:30

   Enter value b:10

   The result of adding is 40.

   The result of subtracting is 20;

   The result of multiplying is 300.

   The result of dividing is 3.

7. A bus company organizes a tour. each participant would pay $2500. Given the number of participants, write a program that calculate and prints the revenue the company will generate for the tour.

8. Write a program to calculate the volume and surface area of a sphere from its radius, given as input. Here are some formulas that might be useful: $V = \frac{4}{3}\pi r^3$ $A = 4\pi r^2$