COP 2800, Java Programming,

Write an interactive Java application to do the following:

Make sure that you write informative interactive messages for your users.

1. **(Diameter, Circumference and Area of a Circle)** In this chapter, you learned about integers and the type int. Java can also represent floating-point numbers that contain decimal points, such as 3.14159. Write an application that inputs from the user the radius of a circle as an integer and prints the circle's diameter, circumference and area using the floating-point value 3.14159 for π.

Use the following formulas (*r* is the radius):

$$diameter = 2r$$
$$circumference = 2\pi r$$
$$area = \pi r^2$$

2. Write an interactive java program to calculate the cost of "driving your car". Find out how much you drive every day, miles per gallon your car gives and the price of gas. Your output should include weekly, monthly and yearly cost of driving. Include interactive messages for the users.

Grade rubric for each program:

Program comments	3
Program code file (.java)	10
Ran program screen shot	2
Assessment/Reflection	3
Challenges	2
Total	20

Purpose: The program ties to the following student learning outcomes

- MLO 1. Solve problems, design solutions, write and test code in Java using correct code structures and following professional programming standards.