CH6

1. Write a rating program for a software development firm with the following rating policies.
   a. Core competency - This parameter measures an employee's involvement, innovation, and passion toward their assigned tasks, and is graded on 10 points.
   b. Performance evaluation - This parameter measures an employee's performance over the year, and is graded on 30 points.
   c. Ideation - An employee is measured on their patent submissions, patents awarded, technical papers presented, etc. and is graded on 10 points.
   d. The performance evaluation accounts for 50% of an employee's final rating, core competency accounts for 30%, and ideation accounts for 20%.
   The total points obtained by an employee are summed up and normalized. Employees with points of 80 or more are rated a 1, those between 60 to 79 are rated a 2, those between 50 to 59 are rated a 3, and those less than 50 are rated a 4.The program will read an employee's points against the three criteria and output the total points obtained on a scale of 100, and the final rating point. Define and use a structure for the employee records.

7. Define a class called ***Pizza*** that has member variables to track the type of pizza(either deep dish, hand tossed, or pan) along with the size (either small, medium, or large) and the number of pepperoni or cheese toppings. You can use constants to represent the type and size. Include mutator and accessor functions for your class.
   Create a void function, ***outputDescription( )***, that outputs a textual description of the pizza object. Also include a function, ***computePrice( )***, that computes the cost of the pizza and returns it as a double according to the rules:
   Small pizza = $10 + $2 per topping
   Medium pizza = $14 + $2 per topping
   Large pizza = $17 + $2 per topping
   Write a suitable test program that creates and outputs a description and price of various pizza objects.

10. Create a ***Weight*** class that internally stores a weight in pounds. Create functions ***setWeightPounds***, ***setWeightKilograms***, and ***setWeightOunces*** that takes an input weight in the specified weight scale, converts the weight to pounds if required, and store that weight in the class member variable. Also create functions that return the stored weight in pounds, kilograms, and ounces. Write a ***main*** function to test your class. Use the equations below to convert between

the weight scales.
1 pound = 16 ounces
1 kilogram = 2.21 pounds

12. Your Community Supported Agriculture (CSA) farm delivers a box of fresh fruits and vegetables to your house once a week. For this Programming Project, define the class ***BoxOfProduce*** that contains exactly three bundles of fruits or vegetables. You can represent the fruits or vegetables as an array of type ***string***. Add accessor and mutator functions to get or set the fruits or vegetables stored in the array. Also write an ***output*** function that displays the complete contents of the box on the console. Next write a main function that creates a ***BoxOfProduce*** with three items randomly selected from this list:
    Broccoli
    Tomato
    Kiwi
    Kale
    Tomatillo
    This list should be stored in a text file that is read in by your program. For now you can assume that the list contains exactly five types of fruits or vegetables. Don't worry if your program randomly selects duplicate produce for the three items. Next, the main function should display the contents of the box and allow the user to substitute any one of the five possible fruits or vegetables for any of the fruits or vegetables selected for the box. After the user is done with substitutions output the final contents of the box to be delivered.