<u>Problem 1</u>

1. Create a class called Candy. This class should have the following:
   - Two instance variables: A String named "type" and an integer named "sugar".
   - A constructor that takes a String and an int as the parameters. It should set the instance variables accordingly.
   - A void method "makeNoise" that prints out "Crunch!"
   - A getter method for the sugar instance variable.
   - A void method "printAllergyInfo" that prints out "Does not contain nuts!"

2. Create a class called ChocolateBar that extends Candy. This child class should have the following:
   - Two instance variables: A String named "typeOfChocolate" and a boolean named "nutContent.
   - A constructor that takes in 4 parameters: A String named "type", an int named "sugar", a String named "typeOfChocolate", and a boolean named "nutContent". The constructor should take the first two parameters and send them to the super class constructor. Then it should set the last two parameters with the instance variables.
   - An overridden method "makeNoise" that prints out "chew, chew".
   - An overridden method "printAllergyInfo" that prints out "CONTAINS TREE NUTS" if the nutContent is set to true, otherwise it calls the super's printAllergyInfo method. (Hint: Super.____();)
   - A getter method for the typeOfChocolate instance variable

3. Create a test class called TestCandy that has a main method. The main method should contain the following:
   - Create a Candy object with the reference variable c1. Assign "Hard Candy" to the type reference variable and 14 as the sugar instance variable.
   - Call the makeNoise method on c1
   - Print out the sugar content of c1 using the getter method. Use the following format (see output)
   - Create a ChocolateBar object with the reference variable "snickers". Assign the following:
       type: "Chocolate"
       sugar: 27
       typeOfChocolate: "Milk Chocolate"
       nutContent: true
   - Call the makeNoise and printAllergyInfo methods on snickers
   - Print out the sugar content and type of chocolate using the getters. Use the following format (see output)

Output:

C1's info:
Crunch!
This candy's sugar content is: 14

Snicker's info:
chew, chew
CONTAINS TREE NUTS
This candy's sugar content is: 27
Milk Chocolate