CPS 181 In-Session Activity (Solutions)

Goal: Build a Restaurant Program

This guide walks through the same steps with sample code and explanations.

## Part 1: Restaurant class

Create a class named Restaurant with:  
- a String field called name  
- an int field called rating  
  
Should these fields be public or private?

Code so far:

public class Restaurant {  
 private String name;  
 private int rating;  
}

## Part 2: Constructors

Add:  
- a default constructor (sets name to "NoName" and rating to -1)  
- a second constructor that accepts name and rating as parameters

Code so far:

public class Restaurant {  
 private String name;  
 private int rating;  
}  
  
public Restaurant() {  
 name = "NoName";  
 rating = -1;  
}  
  
public Restaurant(String name, int rating) {  
 this.name = name;  
 this.rating = rating;  
}

## Part 3: Mutators (Setters)

Add:  
- setName(String newName)  
- setRating(int newRating)

Code so far:

public class Restaurant {  
 private String name;  
 private int rating;  
}  
  
public Restaurant() {  
 name = "NoName";  
 rating = -1;  
}  
  
public Restaurant(String name, int rating) {  
 this.name = name;  
 this.rating = rating;  
}  
  
public void setName(String newName) {  
 this.name = newName;  
}  
  
public void setRating(int newRating) {  
 this.rating = newRating;  
}

## Part 4: Accessors (Getters)

Add:  
- getName()  
- getRating()

Code so far:

public class Restaurant {  
 private String name;  
 private int rating;  
}  
  
public Restaurant() {  
 name = "NoName";  
 rating = -1;  
}  
  
public Restaurant(String name, int rating) {  
 this.name = name;  
 this.rating = rating;  
}  
  
public void setName(String newName) {  
 this.name = newName;  
}  
  
public void setRating(int newRating) {  
 this.rating = newRating;  
}  
  
public String getName() {  
 return name;  
}  
  
public int getRating() {  
 return rating;  
}

## Part 5: Print method

Add a print() method that prints:  
Restaurant: <name>, Rating: <rating>

Code so far:

public class Restaurant {  
 private String name;  
 private int rating;  
}  
  
public Restaurant() {  
 name = "NoName";  
 rating = -1;  
}  
  
public Restaurant(String name, int rating) {  
 this.name = name;  
 this.rating = rating;  
}  
  
public void setName(String newName) {  
 this.name = newName;  
}  
  
public void setRating(int newRating) {  
 this.rating = newRating;  
}  
  
public String getName() {  
 return name;  
}  
  
public int getRating() {  
 return rating;  
}  
  
public void print() {  
 System.out.println("Restaurant: " + name + ", Rating: " + rating);  
}

## Part 6: Main method

In a class called RestaurantFavorites, add a main method.  
Create at least 2 Restaurant objects using both constructors.  
Call print() on each one.

Code so far:

public class Restaurant {  
 private String name;  
 private int rating;  
}  
  
public Restaurant() {  
 name = "NoName";  
 rating = -1;  
}  
  
public Restaurant(String name, int rating) {  
 this.name = name;  
 this.rating = rating;  
}  
  
public void setName(String newName) {  
 this.name = newName;  
}  
  
public void setRating(int newRating) {  
 this.rating = newRating;  
}  
  
public String getName() {  
 return name;  
}  
  
public int getRating() {  
 return rating;  
}  
  
public void print() {  
 System.out.println("Restaurant: " + name + ", Rating: " + rating);  
}  
  
public class RestaurantFavorites {  
 public static void main(String[] args) {  
 Restaurant r1 = new Restaurant();  
 Restaurant r2 = new Restaurant("Joe's Diner", 4);  
  
 r1.setName("Pita House");  
 r1.setRating(5);  
  
 r1.print();  
 r2.print();  
 }  
}

## Part 7 (Bonus): Compare ratings

Add a method called compareRating(Restaurant other) that compares two restaurants and prints which one is rated higher.

Code so far:

public class Restaurant {  
 private String name;  
 private int rating;  
}  
  
public Restaurant() {  
 name = "NoName";  
 rating = -1;  
}  
  
public Restaurant(String name, int rating) {  
 this.name = name;  
 this.rating = rating;  
}  
  
public void setName(String newName) {  
 this.name = newName;  
}  
  
public void setRating(int newRating) {  
 this.rating = newRating;  
}  
  
public String getName() {  
 return name;  
}  
  
public int getRating() {  
 return rating;  
}  
  
public void print() {  
 System.out.println("Restaurant: " + name + ", Rating: " + rating);  
}  
  
public class RestaurantFavorites {  
 public static void main(String[] args) {  
 Restaurant r1 = new Restaurant();  
 Restaurant r2 = new Restaurant("Joe's Diner", 4);  
  
 r1.setName("Pita House");  
 r1.setRating(5);  
  
 r1.print();  
 r2.print();  
 }  
}  
  
public void compareRating(Restaurant other) {  
 if (this.rating > other.rating) {  
 System.out.println(this.name + " is rated higher than " + other.name);  
 } else if (this.rating < other.rating) {  
 System.out.println(other.name + " is rated higher than " + this.name);  
 } else {  
 System.out.println("Both restaurants have the same rating.");  
 }  
}