Q1.

package q1;  
  
import java.util.Scanner;  
  
public class Main {  
 public static void main(String[] args) {  
  
 Scanner scan = new Scanner(System.*in*);  
  
 System.*out*.println("Enter temperature in Celsius: ");  
 double celsius = scan.nextDouble();  
  
 Temperature temp = new Temperature(celsius);  
 System.*out*.println("Enter temperature in Fahrenheit: " + temp.getFahrenheit());  
  
 System.*out*.println("Enter a temperature in Fahrenheit: ");  
 double fahrenheit = scan.nextDouble();  
  
 temp.setFahrenheit(fahrenheit);  
 System.*out*.println("Enter temperature in Celsius: " + temp.getCelcius());  
  
  
 }  
}

package q1;  
  
public class Temperature {  
 private double celcius;  
  
 public Temperature(){  
 this.celcius = 0;  
 }  
  
 public Temperature(double celcius){  
 this.celcius = celcius;  
 }  
  
 public double getCelcius(){  
 return celcius;  
 }  
 public double getFahrenheit(){  
 return (celcius \* 9/5) + 32;  
 }  
 public void setFahrenheit(double fahrenheit){  
 this.celcius = (fahrenheit-32) \* 5/9 ;  
 }  
  
  
}

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Q2.

package q2;  
  
import q1.Temperature;  
  
import java.util.Scanner;  
  
public class Main {  
 public static void main(String[] args) {  
  
 Scanner sc = new Scanner(System.*in*);  
  
 System.*out*.println("Enter temerature in Farenheit: ");  
 double Farenheit = sc.nextDouble();  
  
 Temperature temp = new Temperature(Farenheit);  
 temp.setFahrenheit(temp.getFahrenheit());  
  
 System.*out*.println("Equivalent Temperature in Celcius: "+ temp.getFahrenheit());  
  
 }  
}

package q2;  
  
public class Temerature {  
  
 private double celsius;  
  
 public Temerature() {  
 this.celsius = 0.0;  
 }  
  
 public Temerature(double celsius) {  
 this.celsius = celsius;  
 }  
  
 public double getCelsius() {  
 return celsius;  
 }  
 public double getFahrenheit() {  
 return (celsius \* 9 / 5) + 32;  
 }  
  
 public void setCelsius(double celsius) {  
 this.celsius = celsius;  
 }  
  
 public void setFahrenheit(double fahrenheit) {  
 this.celsius = (fahrenheit - 32) \* 5 / 9;  
 }  
}

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AI-generated content may be incorrect.

Q3.

package q3;  
  
import java.util.Scanner;  
  
public class Main {  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
  
 System.*out*.print("Enter the inner radius (ri): ");  
 double ri = scanner.nextDouble();  
  
 System.*out*.print("Enter the outer radius (ro): ");  
 double ro = scanner.nextDouble();  
  
 Circle innerCircle = new Circle(ri);  
 Circle outerCircle = new Circle(ro);  
  
 double shadedArea = outerCircle.computeArea() - innerCircle.computeArea();  
  
 System.*out*.println("The area of the circular region is: " + shadedArea);  
 }  
}

package q3;  
  
public class Circle {  
  
 private double radius;  
  
 public Circle(double radius) {  
 this.radius = radius;  
 }  
  
 public void setRadius(double radius) {  
 this.radius = radius;  
 }  
  
 public double computeArea() {  
 return Math.*PI* \* radius \* radius;  
 }  
  
 public double computeCircumference() {  
 return 2 \* Math.*PI* \* radius;  
 }  
 }

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Q4.

package q4;  
  
public class Main {  
 public static void main(String[] args) {  
   
 Bicycle bike1 = new Bicycle();  
 System.*out*.println("Bike1 Owner: " + bike1.getOwner().getOwnerName());  
 System.*out*.println("Bike1 Phone: " + bike1.getOwner().getPhoneNo());  
  
   
 Bicycle bike2 = new Bicycle("Alice Johnson", "123-456-7890");  
 System.*out*.println("Bike2 Owner: " + bike2.getOwner().getOwnerName());  
 System.*out*.println("Bike2 Phone: " + bike2.getOwner().getPhoneNo());  
  
  
 bike1.getOwner().setOwnerName("Bob Smith");  
 bike1.getOwner().setPhoneNo("098-765-4321");  
 System.*out*.println("Updated Bike1 Owner: " + bike1.getOwner().getOwnerName());  
 System.*out*.println("Updated Bike1 Phone: " + bike1.getOwner().getPhoneNo());  
 }  
}

package q4;  
  
public class Bicycle {  
 private Owner owner;  
  
   
 public Bicycle() {  
 this.owner = new Owner(); // Initializes with default owner  
 }  
  
  
 public Bicycle(String ownerName, String phoneNo) {  
 this.owner = new Owner(ownerName, phoneNo);  
 }  
  
   
 public Owner getOwner() {  
 return owner;  
 }

package q4;  
  
public class Owner {  
  
 private String ownerName;  
 private String phoneNo;  
  
  
 public Owner() {  
 this.ownerName = "Unknown";  
 this.phoneNo = "Unknown";  
 }  
  
 public Owner(String ownerName, String phoneNo) {  
 this.ownerName = ownerName;  
 this.phoneNo = phoneNo;  
 }  
  
 public String getOwnerName() {  
 return ownerName;  
 }  
  
 public void setOwnerName(String ownerName) {  
 this.ownerName = ownerName;  
 }  
  
 public String getPhoneNo() {  
 return phoneNo;  
 }  
  
 public void setPhoneNo(String phoneNo) {  
 this.phoneNo = phoneNo;  
 }  
 }

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