|  |  |
| --- | --- |
| Q-01 | Temperature.class  package Q\_01;  public class Temperature {  private double celsius;  //non-parameterized constructor  public Temperature() {  this.celsius = 0.0;  }  //parameterized constructor  public Temperature(double celsius) {  this.celsius = celsius;  }  //method to convert Celsius to Fahrenheit  public double toFahrenheit() {  return (celsius \* 9/5) + 32;  }  //method to convert Fahrenheit to Celsius  public double toCelsius() {  return (celsius - 32) \* 5/9;  }  //getter and setter methods  public double getCelsius() {  return celsius;  }   public void setCelsius(double celsius) {  this.celsius = celsius;  } }  Main.class  package Q\_01; import java.util.Scanner; public class Main {  public static void main(String[] args) {   Scanner scan = new Scanner(System.*in*); // Create a Scanner object to read input  System.*out*.print("Enter the temperature in Celsius(℃) : ");  double cel = scan.nextDouble();  Temperature temp = new Temperature(cel); // Create a Temperature object  System.*out*.println("Temperature in Faranheit: " + temp.toFahrenheit() + " ℉");   } } |
| Q-02 | Same Temperature.class in Q-01  Main.class  package Q\_02;  import java.util.Scanner;  public class Main {  public static void main(String[] args) {  Scanner scan = new Scanner(System.*in*); // Create a Scanner object to read input  System.*out*.print("Enter the themperature in Faranheite(℉) : " );  double fahrenheit = scan.nextDouble(); // Create a Temperature object  Temperature temp1 = new Temperature(fahrenheit);  System.*out*.println("Temperature in Celsius: " + temp1.toCelsius() + " ℃");  }  } |
| Q-03 | Circle.class  package Q\_03;  public class Circle {  private double Radius; // radius of the circle  // non-argument constructor  public Circle() {  Radius = 0;  }  // constructor with argument  public Circle(double radius) {  this.Radius = radius;  }  // compute area of the circle  public double computeArea() {  return (Math.*PI* \* Radius \* Radius);  }  // compute circumference of the circle  public double computeCircumference() {  return (2 \* Math.*PI* \* Radius);  }  // get radius  public double getRadius() {  return Radius;  } }  Main.calss  package Q\_03; import java.util.Scanner; public class Main {  public static void main(String[] args) {  // Create a outer Circle object  Scanner scan = new Scanner(System.*in*);  System.*out*.print("Enter the radius of the outer circle: ");  double rad1 = scan.nextDouble();  Circle innerCircle = new Circle(rad1);   // Create a inner Circle object  System.*out*.print("Enter the radius of the inner circle: ");  double rad2 = scan.nextDouble();  Circle outerCircle = new Circle(rad2);   // Display the area and circumference of the circles  System.*out*.println("Area of the ring: " + String.*format*("%.2f",innerCircle.computeArea() - outerCircle.computeArea()));  System.*out*.println("Circumference of the ring: " + String.*format*("%.2f",innerCircle.computeCircumference() + outerCircle.computeCircumference()));  } } |
| Q-04 | Bicycle.class  package Q\_04;  class Bicycle {  // Data Member  private Owner owner;  private String modelName;  private String manufactureYear;   public Bicycle() {  }   public Bicycle(Owner owner, String modelName, String manufactureYear) {  this.owner = owner;  this.modelName = modelName;  this.manufactureYear = manufactureYear;  }   public Owner getOwner() {  return owner;  }   public void setOwner(Owner owner) {  this.owner = owner;  }   public String getModelName() {  return modelName;  }   public void setModelName(String modelName) {  this.modelName = modelName;  }   public String getManufactureYear() {  return manufactureYear;  }   public void setManufactureYear(String manufactureYear) {  this.manufactureYear = manufactureYear;  } }  Owner.class  package Q\_04;  public class Owner {  private String ownerName;  private String phoneNo;   public Owner() {  ownerName = "Unknown";  phoneNo = "xxxxxxxxxx";   }   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;  } }  Main.class  package Q\_04;  public class Main {  public static void main(String[] args) {  //1st method  Owner owner1 = new Owner("Samantha","0777777777");  //2nd method  Owner owner2 = new Owner();  owner2.setOwnerName("Tharidu");  owner2.setPhoneNo("0788888888");   Bicycle bicycle1 = new Bicycle(owner1,"Tomohok","2019");  Bicycle bicycle2 = new Bicycle();  bicycle2.setOwner(owner2);  bicycle2.setModelName("DSI");  bicycle2.setManufactureYear("2020");   System.*out*.println("Name : " + owner1.getOwnerName());  System.*out*.println("Brand Name and Year: " + bicycle1.getModelName()+ " Manufactured in " + bicycle1.getManufactureYear());   System.*out*.println("Name : " + owner2.getOwnerName());  System.*out*.println("Brand Name and Year: " + bicycle2.getModelName()+ " Manufactured in " + bicycle2.getManufactureYear());    } } |
| Q-05 | Course.class  package Q\_05;  public class Course {  public String courseName;  public String courseCode;  public String lecturer;   public Course() {  this.courseName = courseName;  this.courseCode = courseCode;  this.lecturer = lecturer;  }   public String getCourseName() {  return courseName;  }   public void setCourseName(String courseName) {  this.courseName = courseName;  }   public String getCourseCode() {  return courseCode;  }   public void setCourseCode(String courseCode) {  this.courseCode = courseCode;  }   public String getLecturer() {  return lecturer;  }   public void setLecturer(String lecturer) {  this.lecturer = lecturer;  }  }  Lecturer.class  package Q\_05;  public class Lecturer {  public String lecturerName;  public String courseTeaching;   public Lecturer(String lecturerName, String courseTeaching) {  this.lecturerName = lecturerName;  this.courseTeaching = courseTeaching;  }   public Lecturer() {  lecturerName = null;  courseTeaching = null;  }   public String getLecturerName() {  return lecturerName;  }   public void setLecturerName(String lecturerName) {  this.lecturerName = lecturerName;  }   public String getCourseTeaching() {  return courseTeaching;  }   public void setCourseTeaching(String courseTeaching) {  this.courseTeaching = courseTeaching;  } }  Student.class  package Q\_05;  public class Student {  public String studentName;  public String degreeName;  public String courseFollowing;   public Student(String studentName, String degreeName, String courseFollowing) {  this.studentName = studentName;  this.degreeName = degreeName;  this.courseFollowing = courseFollowing;  }   public Student() {  studentName = null;  degreeName = null;  courseFollowing = null;  }   public String getStudentName() {  return studentName;  }   public void setStudentName(String studentName) {  this.studentName = studentName;  }   public String getDegreeName() {  return degreeName;  }   public void setDegreeName(String degreeName) {  this.degreeName = degreeName;  }   public String getCourseFollowing() {  return courseFollowing;  }   public void setCourseFollowing(String courseFollowing) {  this.courseFollowing = courseFollowing;  } }  Main.class  package Q\_05;  public class Main {  public static void main(String[] args) {   Course oop = new Course();  oop.setCourseName("Object oriented programming");  oop.setCourseCode("CTEC22043");   Lecturer Kumar = new Lecturer();  Kumar.setLecturerName("Kumar");  Kumar.setCourseTeaching("Object oriented programming");   Student Dhananjaya = new Student();  Dhananjaya.setStudentName("Dhananjaya");  Dhananjaya.setDegreeName("BICT");  Dhananjaya.setCourseFollowing("Object oriented programming");   System.*out*.println("Student Details:");  System.*out*.println("Student Name: " + Dhananjaya.getStudentName());  System.*out*.println("Degree Name: " + Dhananjaya.getDegreeName());  System.*out*.println("Course Code and Name: " + oop.getCourseCode() +" - "+ oop.getCourseName() );  System.*out*.println("Lecturer Name: " + Kumar.getLecturerName());    } } |