Question: Dealing with Polymorphism and Inheritance 1.1. Create class P...

Dealing with Polymorphism and Inheritance

1.1. Create class Person with attributes name, age and gender.

1.2. Create class Student with attribute grade and,

1.3. Create class Teacher with attribute salary.

Note: Class Student and Teacher must inherit from Person. In main class, create and print two students and one teacher. Apply inheritance, setter and getter.

Sample Output: Student 2:

Name: Rachel

Age: 15

Gender: F

Grade: 2.50

Expert Answer

Hi,

Please find below code as per your requirement.

Hope this answer helps you.

Thanks.

Answer:-

```
/*****************************Java Code***********************************/

/**************************************Person.java**********************************************/

public class Person {
	//instance variables
	private String name;
	private int age;
	private char gender;

	/**
	 * Default constructor
	 */
	public Person() {

	}

	/**
	 * Parameterized constructor with 3 parameter to build Person object
	 * @param name
	 * @param age
	 * @param gender
	 */
	public Person(String name, int age, char gender) {
		super();
		this.name = name;
		this.age = age;
		this.gender = gender;
	}

	/*Getters and Setters*/
	public String getName() {
		return name;
	}
	public void setName(String name) {
		this.name = name;
```

```
	}
	public int getAge() {
		return age;
	}
	public void setAge(int age) {
		this.age = age;
	}
	public char getGender() {
		return gender;
	}
	public void setGender(char gender) {
		this.gender = gender;
	}

	/**
	 * This method returns String represenation of Person
	 */
	@Override
	public String toString() {
		return "Name: "+name+"\nAge: "+age+"\nGender: "+gender;
	}


}

/************************************************Student.java*****************************************
/


/**
 * This class is subclass of Person and represent as Student
 *
 */
public class Student extends Person{

	//instance variable
	private double grade;

	/**
	 * Default constructor
	 */
	public Student() {
		super();
	}

	/**
	 * Parameterized constructor which takes parameter two construct Student
	 * @param name
	 * @param age
	 * @param gender
	 * @param grade
	 */
	public Student(String name, int age, char gender,double grade) {
		//calling superclass constructor
		super(name, age, gender);
		this.grade = grade;


	}

	/*Getters and Setters*/
	public double getGrade() {
		return grade;
	}

	public void setGrade(double grade) {
		this.grade = grade;
	}

	/**
	 * This method returns String represenation of Student
	 */
	@Override
	public String toString() {
		//using super.toString to get person toString
		return super.toString() +"\nGrade: "+grade;
	}


}

/************************************************Teacher.java*********************************/
```

```
/**
 * This class is subclass of Person and represent as Teacher
 *
 */
public class Teacher extends Person{

	//instance variable
	private double salary;

	/**
	 * Default constructor
	 */
	public Teacher() {
		super();
	}

	/**
	 * Parameterized constructor which takes parameter two construct Teacher
	 * @param name
	 * @param age
	 * @param gender
	 * @param salary
	 */
	public Teacher(String name, int age, char gender,double salary) {
		//calling superclass constructor
		super(name, age, gender);
		this.salary = salary;
	}

	/*Getters and Setters*/
	public double getSalary() {
		return salary;
	}

	public void setSalary(double salary) {
		this.salary = salary;
	}

	/**
	 * This method returns String represenation of Teacher
	 */
	@Override
	public String toString() {
		//using super.toString to get person toString
		return super.toString() +"\nSalary: "+salary;
	}



}

/***********************************************Driver.java*****************************************
/

/**
 * This is driver class to test Student and Teacher
 *
 */
public class Driver {

	public static void main(String[] args) {

		//Creating student object with parameterized constructor
		Student student1 = new Student("Rachel", 15, 'F', 2.50);

		//printing student1 object using toString
		System.out.println("Student 1:");
		System.out.println(student1.toString());

		//Creating student object with default constructor
		Student student2 = new Student();
		//Setting all other values to student using setters
		student2.setName("Helen");
		student2.setAge(20);
		student2.setGender('F');
		student2.setGrade(4.8);

		//printing student2 object using toString
		System.out.println("\nStudent 2:");
		System.out.println(student2.toString());
```

```
        //Creating teacher object with parameterized constructor
        Teacher teacher = new Teacher("Richa", 40, 'F', 50000);

        //printing teacher object using toString
        System.out.println("\nTeacher: ");
        System.out.println(teacher.toString());

    }
}
```

/*******************************Output*********************************/**

```
Student 1:
Name: Rachel
Age: 15
Gender: F
Grade: 2.5

Student 2:
Name: Helen
Age: 20
Gender: F
Grade: 4.8

Teacher:
Name: Richa
Age: 40
Gender: F
Salary: 50000.0
```

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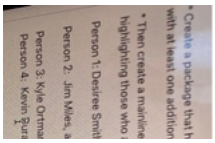
java programming/ each person should include name and last name, age, ethnicity, religion, email a…



See answer

For this exercise, you need to write TWO classes. (To enable two classes to coexist in the same .java file, only one of them can be public (and shares its name with the name of the .java file). The structure of

See answer

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Q: Create Java Project java_inheritence_yourNameLastname that; SECTION3 (under source directory called, src, create a package csci3444.inheritance and put all code in it) Create an interface called “Person” with below methods; public String getName(); public String getDetails(); Create an abstract class called “PersonBaseImpl” that implements “Person” interface. has attribute...

A: See answer 100% (1 rating)

Q: How much heat is absorbed when 40.00g of C(s) reacts in the presence of excess SO2(g) to produce CS(l) and CO(g) according to the following chemical equation 5C(s)+2SO2(g)-->CS2(l)+4CO(g) ^H=239.9kJ

A: See answer 100% (2 ratings)

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