

Assignment 1: Person → Student (Basic Inheritance)

```
class Person {  
    String name;  
    int age;  
}  
  
class Student extends Person {  
    int rollNo;  
  
    void display() {  
        System.out.println("Name: " + name);  
        System.out.println("Age: " + age);  
        System.out.println("Roll No: " + rollNo);  
    }  
  
    public static void main(String[] args) {  
        Student s = new Student();  
        s.name = "Jayasree";  
        s.age = 20;  
        s.rollNo = 101;  
  
        s.display();  
    }  
}
```

Assignment 2: Vehicle → Car (Property Inheritance)

```
class Vehicle {  
    int speed;  
}
```

```
class Car extends Vehicle {  
    String brand;  
  
    void showDetails() {  
        System.out.println("Brand: " + brand);  
        System.out.println("Speed: " + speed + " km/h");  
    }  
  
    public static void main(String[] args) {  
        Car c = new Car();  
        c.brand = "Toyota";  
        c.speed = 120;  
  
        c.showDetails();  
    }  
}
```

Assignment 3: Animal → Dog (Method Inheritance)

```
class Animal {  
    void eat() {  
        System.out.println("Animal is eating");  
    }  
}
```

```
class Dog extends Animal {  
    void bark() {  
        System.out.println("Dog is barking");  
    }  
  
    public static void main(String[] args) {
```

```
Dog d = new Dog();  
  
d.eat();  
  
d.bark();  
  
}  
  
}
```

Assignment 4: Employee → Manager (Code Reuse)

```
class Employee {  
    double salary;  
}  
  
class Manager extends Employee {  
    double bonus;  
  
    void calculateTotalSalary() {  
        double total = salary + bonus;  
        System.out.println("Total Salary: " + total);  
    }  
  
    public static void main(String[] args) {  
        Manager m = new Manager();  
        m.salary = 50000;  
        m.bonus = 10000;  
  
        m.calculateTotalSalary();  
    }  
}
```

Assignment 5: Bank → SavingAccount (Parent Data Usage)

```
class Bank {  
    double interestRate = 5.0;
```

```
}
```

```
class SavingAccount extends Bank {  
    void calculateInterest(double amount) {  
        double interest = (amount * interestRate) / 100;  
        System.out.println("Interest: " + interest);  
    }  
}
```

```
    public static void main(String[] args) {  
        SavingAccount sa = new SavingAccount();  
        sa.calculateInterest(10000);  
    }  
}
```

Assignment 6: Constructor Inheritance (super keyword)

```
class Person {  
    String name;  
  
    Person(String name) {  
        this.name = name;  
    }  
}
```

```
class Student extends Person {  
    int rollNo;  
  
    Student(String name, int rollNo) {  
        super(name);  
        this.rollNo = rollNo;  
    }  
}
```

```
void display() {  
    System.out.println("Name: " + name);  
    System.out.println("Roll No: " + rollNo);  
}
```

```
public static void main(String[] args) {  
    Student s = new Student("Jayasree", 101);  
    s.display();  
}  
}
```