

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();  
}  
}
```