Assignment-zhuang

```
import java.util.Scanner;
import java.util.List;
import java.util.ArrayList;
public class Test {
	public static void main(String[] args) {
		// Create an ArrayList to store SalesEmployee objects.
		List<SalesEmployee> mylist = new ArrayList<>();
		// Initialize a SalesAgent object and set its attributes
using setter methods.
		SalesAgent p1 = new SalesAgent();
		String fname1 = "Lily";
		p1.setFirstName(fname1);
		String lname1 = "Ann";
		p1.setLastName(lname1);
		String pps1 = "9238456B";
		p1.setPPS(pps1);
		// Add the SalesAgent object to the list.
		mylist.add(p1);
		// Initialize a SalesPerson object and set its attributes
using setter methods.
		SalesPerson p2 = new SalesPerson();
		String fname2 = "Joe";
		p2.setFirstName(fname2);
		String lname2 = "John";
		p2.setLastName(lname2);
		String pps2 = "1234415A";
		p2.setPPS(pps2);
		// Add the SalesPerson object to the list.
		mylist.add(p2);
		// Initialize a SalesAgent object using a constructor with
default values.
		SalesAgent p3 = new SalesAgent("Josh", "Love", "7461512C");
		// Add the SalesAgent object to the list.
		mylist.add(p3);
		// Loop through the list and prompt the user to enter sales
for each
		// SalesEmployee.
		for (int i = 0; i < mylist.size(); i++) {
			System.out.print("Please enter sales for employee No.
" + (i + 1) + ": ");
			Scanner myScan = new Scanner(System.in);
			double nums = myScan.nextDouble();
```

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                  mylist.get(i).sales = nums;
                  // Calculate commission for the SalesEmployee.
                  mylist.get(i).calculateCommission();
            }
            // Use an enhanced for loop to print the details of each
SalesEmployee.
            for (SalesEmployee p : mylist) {
                  System.out.println(p.toString());
            }
      }
}
```

```
import java.text.DecimalFormat;
public abstract class SalesEmployee {
      // Declare variables
      private String firstName;
      private String lastName;
      private static int bikeEmployeeNumber = 1;
      private String ppsNumber;
      protected double sales = 0.00;
      protected double commission = 0.00;
      private int employeeNumber = 0;
      // Constructor
      public SalesEmployee() {
            this.firstName = "";
            this.lastName = "";
            this.ppsNumber = "";
            this.employeeNumber = bikeEmployeeNumber++;
      }
      public SalesEmployee(String firstName, String lastName, String
ppsNumber) {
            this.firstName = firstName;
            this.lastName = lastName;
            this.ppsNumber = ppsNumber;
            this.employeeNumber = bikeEmployeeNumber++;
      }
      // Set the firstName, lastName, PPS
      public void setFirstName(String name) {
            this.firstName = name;
      }
      public void setLastName(String lname) {
            this.lastName = lname;
      }
```

```
	public void setPPS(String PPS) {
		this.ppsNumber = PPS;
	}
	// Get the value of variables
	public String getfirstName() {
		return firstName;
	}
	public String getLastName() {
		return lastName;
	}
	public String getPPS() {
		return ppsNumber;
	}
	public int getEmployeeNumber() {
		return employeeNumber;
	}
	// Override toString method from Objective method;
	public String toString() {
		// Using DecimalFormat to format the numbers
		DecimalFormat df = new DecimalFormat("0.00");
		return "Employee name is: " + firstName + " " + lastName +
"; PPS number is: " + ppsNumber
				+ ";\nEmployee number is: " + employeeNumber + ";
Commission is: " + df.format(commission)
				+ "; Total sales is:" + sales + "; Type is " +
getClass().getSimpleName();
	};
	// Crate a abstract method called calculateCommission;
	public abstract void calculateCommission();
}



public class SalesAgent extends SalesEmployee {
//Constructor
	public SalesAgent() {
		super();
	}
	public SalesAgent(String firstName, String lastName, String
ppsNumber) {
		super(firstName, lastName, ppsNumber);
	}
	public void calculateCommission() {
		commission = sales * 0.1;
	}
}
```

```java
public class SalesPerson extends SalesEmployee {
//Constructor
	public SalesPerson() {
		super();
	}
	public SalesPerson(String firstName, String lastName, String
ppsNumber) {
		super(firstName, lastName, ppsNumber);
	}
	public void calculateCommission() {
		commission = sales * 0.15;
	}
}
```

Consequence