**Java- Interface and abstract classes**

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**Question : Interface and abstract classes**

An organization has employees belong to different categories. Three of these categories are executives, supervisors, and peons. Every employee has an employee code. Apart from that HR department maintains records of employee name, address, date of birth etc… Every employee is paid an incentive at the end of the year which is 10% of the salary. If the salary is under Rs.5000.00, incentive is not paid.

i Create an interface ‘*paybonus’* which has a method ‘*calcincentive’*

ii Create a class ‘employee’ having properties employeeid, employeename, address, dob and salary. Include a constructor to assign values to above properties. Include a method ‘*displayinfo’* to display the values of above properties.

iii Create a class ‘executive’ extending ‘employee’ class and implementing ‘*paybonus’* interface. Override the methods appropriately. Include an additional property *travelallowance* which is paid only to executives.

iv Indika Peiris joined as an executive to the above organization- He is offered a basic salary of Rs. 20,000.00 per month with a travel allowance of Rs. 2000.00 per month. Write a separate class with the ‘main’ method to display Indika Peiris’s salary information.

package com.company.executive2main;

public interface paybonus {

public abstract void calcincentive();

}

package com.company.executive2main;

public class employee {

private int employeeid;

private String employeename;

private String address;

private String dob;

protected float salary;

public employee(int employeeid,String employeename,String address,String dob,float salary){

this.employeeid = employeeid;

this.employeename = employeename;

this.address = address;

this.dob = dob;

this.salary = salary;

}

public void displayinfo(){

System.out.println("Employee ID is " + employeeid);

System.out.println("Employeename is " + employeename);

System.out.println("Address is " + address);

System.out.println("Date of birth is " + dob);

System.out.println("Salary is " + salary);

}

}

package com.company.executive2main;

public class executive extends employee implements paybonus{

private float travelallowance;

public executive(int employeeid,String employeename,String address,String dob,float salary,float travelallowance){

super(employeeid,employeename,address,dob,salary);

this.travelallowance = travelallowance;

}

public void calcincentive(){

float incentive;

if(salary >= 5000){

incentive = 0.1f \* salary;

System.out.println("Incentive " + incentive);

}else{

System.out.println("Salary is bellow Rs.5000.No incentive paid");

}

}

public void displayinfo(){

super.displayinfo();

System.out.println("Travelallowance is " + travelallowance);

}

}

package com.company.executive2main;

public class Executive2main {

public static void main(String[] args) {

executive e1 = new executive(1234,"Indika Peiris","No 86,gamagoda,kalutara south","2000.04.24",20000.00f,2000.00f);

e1.displayinfo();

e1.calcincentive();

}

}