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import java.util.*;
import java.util.Date;
abstract class Employee {
    protected int yr;
    private int i, len, digit, ch;
    protected String Emp_name, Address, Mail_id, str;
    protected double Emp_id, mobile_no;
    protected float bp, da, hra, pf, scf, net_sal, gross_sal;
    Employee(){
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter name:");
        Emp_name=sc.nextLine();
        System.out.println("Enter Address:");
        Address=sc.nextLine();
        System.out.print("Enter Mail-ID:");
        Mail_id=sc.nextLine();
        System.out.print("Enter ID:");
        Emp_id=sc.nextDouble();
        System.out.print("Enter Mobile No.:");
        mobile_no=sc.nextDouble();
        System.out.print("Enter Salery:");
        bp=sc.nextFloat();
        Date d=new Date();
        str=d.toString();
        len=str.length();
        for(i=len-4;i<len;i++){
            digit=str.charAt(i);
            digit=digit-48;
            yr=yr*10+digit;
        }
    }
    public void calc() {
        da=bp*97/100;
        hra=bp*10/100;
        pf=bp*12/100;
        scf=bp*0.1f/100;
        gross_sal=bp+da+hra;
        net_sal=gross_sal-pf-scf;
    }
    public void edit() {
        Scanner sc=new Scanner(System.in);
        System.out.print("1.Name\n2.Address\n3.ID\n4.Contact Number\n5.Email-ID\n6.Back to menu\nEnter choice:");
        ch=sc.nextInt();
        if(ch==1) {
            System.out.print("Enter new Name:");
            Emp_name=sc.nextLine();
        }
        else if(ch==2) {
            System.out.println("Enter new Address:");
            Address=sc.nextLine();
        }
        else if(ch==3) {
            System.out.print("Enter new ID :");
            Emp_id=sc.nextDouble();
        }
        else if(ch==4) {
            System.out.print("Enter new Contact Number: ");
            mobile_no=sc.nextDouble();
        }
        else if(ch==5) {
            System.out.print("Enter new Email-ID:");
            Mail_id=sc.next();
        }
    }
}

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        else if(ch==6) {
        }
        else System.out.println("Invalid choice");
    }
    abstract public void paySlip();
    abstract public void view();
}

class AssistantProjectManager extends Employee {
    private int cl=10,el=10,temp,digit,choice,day,len,i;
    private String y;
    public boolean check(double id) {
        if(id==this.Emp_id) return true;
        else return false;
    }
    public void paySlip() {
        System.out.println("Name :"+Emp_name+"\nID :"+Emp_id+"\n PAY SLIP");
        System.out.println("BP \t\t : "+bp+"\nDA \t\t : "+da+"\nHRA \t\t : "+hra+"\n-----\nGross Salery \t : "+gross_sal+"\nPF \t\t : "+pf+"\nStaff Club Fund : "+scf+"\n-----\nNet Salery\t : "+net_sal);
    }
    public void view() {
        System.out.println("Name : "+Emp_name+"\t ID : "+Emp_id+"\nAddress : "+Address+"\nContact Number : "+mobile_no+"\t Email-ID : "+Mail_id);
    }
    public void Leave() {
        Date d1=new Date();
        y=d1.toString();
        len=y.length();
        Scanner sc=new Scanner(System.in);
        for(i=-4;i<len;i++){
            digit=y.charAt(i);
            digit=digit-48;
            temp=temp*10+digit;
        }
        if(temp==yr) {
            System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to menu\nEnter Choice:");
            choice=sc.nextInt();
            switch(choice) {
                case 1:System.out.print("Enter no.of days:");
                    day=sc.nextInt();
                    if(cl-day>=0) {
                        cl=cl-day;
                        System.out.println("Leave Granted\t Total no. of leaves left:"+cl);
                    }
                    else System.out.println("Request exceeds the no. of leaves available");
                    break;
                case 2:System.out.print("Enter no.of days:");
                    day=sc.nextInt();
                    if(el-day>=0) {
                        el=el-day;
                        System.out.println("Leave Granted\t Total no. of leaves left:"+el);
                    }
                    else System.out.println("Request exceeds the no. of leaves available");
                    break;
                case 3:break;
                default:System.out.println("Invalid choice");
            }
        }
    }
}

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        }
    }
    else {
        cl=10;
        el=el+(temp-yr)*10;
        System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to
menu\nEnter Choice:");
        choice=sc.nextInt();
        switch(choice) {
            case 1: System.out.print("Enter no.of days:");
                day=sc.nextInt();
                if(cl-day>=0) {
                    cl=cl-day;
                    System.out.println("Leave Granted\t Total no. of leaves
left:"+cl);
                }
                else System.out.println("Request exceeds the no. of leaves
available");
                break;
            case 2: System.out.print("Enter no.of days:");
                day=sc.nextInt();
                if(el-day>=0) {
                    el=el-day;
                    System.out.println("Leave Granted\t Total no. of leaves
left:"+el);
                }
                else System.out.println("Request exceeds the no. of leaves
available");
                break;
            case 3: break;
            default: System.out.println("Invalid choice");
        }
    }
}

class Programmer extends Employee {
    private int cl=10,el=10,temp,digit,choice,day, len,i;
    private String y;
    public boolean check(double id) {
        if(id==this.Emp_id) return true;
        else return false;
    }
    public void paySlip() {
        System.out.println("Name :"+Emp_name+"\nID :"+Emp_id+"\n PAY SLIP");
        System.out.println("BP \t\t : "+bp+"\nDA \t\t : "+da+"\nHRA \t\t :
"+hra+"\n-----\nGross Salery \t : "+gross_sal+"\nPF
\t\t : "+pf+"\nStaff Club Fund : "+scf+"\n-----\n
Net Salery\t : "+net_sal);
    }
    public void view() {
        System.out.println("Name : "+Emp_name+"\t ID : "+Emp_id+"\nAddress :
"+Address+"\nContact Number : "+mobile_no+"\t Email-ID : "+Mail_id);
    }
    public void Leave() {
        Date d1=new Date();
        y=d1.toString();
        len=y.length();
        Scanner sc=new Scanner(System.in);
        for(i=-4;i<len;i++){
            digit=y.charAt(i);
            digit=digit-48;
            temp=temp*10+digit;
        }
    }
}

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        if(temp==yr) {
            System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to
menu\nEnter Choice:");
            choice=sc.nextInt();
            switch(choice) {
                case 1:System.out.print("Enter no.of days:");
                    day=sc.nextInt();
                    if(cl-day>=0) {
                        cl=cl-day;
                        System.out.println("Leave Granted\t Total no. of leaves
left:"+cl);
                    }
                    else System.out.println("Request exceeds the no. of leaves
available");
                    break;
                case 2:System.out.print("Enter no.of days:");
                    day=sc.nextInt();
                    if(el-day>=0) {
                        el=el-day;
                        System.out.println("Leave Granted\t Total no. of leaves
left:"+el);
                    }
                    else System.out.println("Request exceeds the no. of leaves
available");
                    break;
                case 3:break;
                default:System.out.println("Invalid choice");
            }
        }
        else {
            cl=10;
            el=el+(temp-yr)*10;
            System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to
menu\nEnter Choice:");
            choice=sc.nextInt();
            switch(choice) {
                case 1:System.out.print("Enter no.of days:");
                    day=sc.nextInt();
                    if(cl-day>=0) {
                        cl=cl-day;
                        System.out.println("Leave Granted\t Total no. of leaves
left:"+cl);
                    }
                    else System.out.println("Request exceeds the no. of leaves
available");
                    break;
                case 2:System.out.print("Enter no.of days:");
                    day=sc.nextInt();
                    if(el-day>=0) {
                        el=el-day;
                        System.out.println("Leave Granted\t Total no. of leaves
left:"+el);
                    }
                    else System.out.println("Request exceeds the no. of leaves
available");
                    break;
                case 3:break;
                default:System.out.println("Invalid choice");
            }
        }
    }
}

class ProjectManager extends Employee {

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private int cl=10,el=10,temp,digit,choice,day,len,i;
private String y;
public boolean check(double id) {
    if(id==this.Emp_id) return true;
    else return false;
}
public void paySlip() {
    System.out.println("Name :"+Emp_name+"\nID :"+Emp_id+"\n PAY SLIP");
    System.out.println("BP \t\t : "+bp+"\nDA \t\t : "+da+"\nHRA \t\t : 
"+hra+"\n-----\nGross Salery \t : "+gross_sal+"\nPF
\t\t : "+pf+"\nStaff Club Fund : "+scf+"\n-----\
nNet Salery\t : "+net_sal);
}
public void view() {
    System.out.println("Name : "+Emp_name+"\t ID : "+Emp_id+"\nAddress : 
"+Address+"\nContact Number : "+mobile_no+"\t Email-ID : "+Mail_id);
}
public void Leave() {
    Date d1=new Date();
    y=d1.toString();
    len=y.length();
    Scanner sc=new Scanner(System.in);
    for(i=-4;i<len;i++){
        digit=y.charAt(i);
        digit=digit-48;
        temp=temp*10+digit;
    }
    if(temp==yr) {
        System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to 
menu\nEnter Choice:");
        choice=sc.nextInt();
        switch(choice) {
            case 1:System.out.print("Enter no.of days:");
            day=sc.nextInt();
            if(cl-day>=0) {
                cl=cl-day;
                System.out.println("Leave Granted\t Total no. of leaves 
left:"+cl);
            }
            else System.out.println("Request exceeds the no. of leaves 
available");
            break;
            case 2:System.out.print("Enter no.of days:");
            day=sc.nextInt();
            if(el-day>=0) {
                el=el-day;
                System.out.println("Leave Granted\t Total no. of leaves 
left:"+el);
            }
            else System.out.println("Request exceeds the no. of leaves 
available");
            break;
            case 3:break;
            default:System.out.println("Invalid choice");
        }
    }
    else {
        cl=10;
        el=el+(temp-yr)*10;
        System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to 
menu\nEnter Choice:");
        choice=sc.nextInt();
        switch(choice) {
            case 1:System.out.print("Enter no.of days:");

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        day=sc.nextInt();
        if(cl-day>=0) {
            cl=cl-day;
            System.out.println("Leave Granted\t Total no. of leaves
left:"+cl);
        }
        else System.out.println("Request exceeds the no. of leaves
available");
        break;
        case 2: System.out.print("Enter no.of days:");
        day=sc.nextInt();
        if(el-day>=0) {
            el=el-day;
            System.out.println("Leave Granted\t Total no. of leaves
left:"+el);
        }
        else System.out.println("Request exceeds the no. of leaves
available");
        break;
        case 3: break;
        default: System.out.println("Invalid choice");
    }
}

}

class TeamLeader extends Employee {
    private int cl=10,el=10,temp,digit,choice,day,len,i;
    private String y;
    public boolean check(double id) {
        if(id==this.Emp_id) return true;
        else return false;
    }
    public void paySlip() {
        System.out.println("Name :"+Emp_name+"\nID :"+Emp_id+"\n PAY SLIP");
        System.out.println("BP \t\t : "+bp+"\nDA \t\t : "+da+"\nHRA \t\t :
"+hra+"\n-----\nGross Salery \t : "+gross_sal+"\nPF
\t\t : "+pf+"\nStaff Club Fund : "+scf+"\n-----\n
Net Salery\t : "+net_sal);
    }
    public void view() {
        System.out.println("Name : "+Emp_name+"\t ID : "+Emp_id+"\nAddress :
"+Address+"\nContact Number : "+mobile_no+"\t Email-ID : "+Mail_id);
    }
    public void Leave() {
        Date d1=new Date();
        y=d1.toString();
        len=y.length();
        Scanner sc=new Scanner(System.in);
        for(i=-4;i<len;i++){
            digit=y.charAt(i);
            digit=digit-48;
            temp=temp*10+digit;
        }
        if(temp==yr) {
            System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to
menu\nEnter Choice:");
            choice=sc.nextInt();
            switch(choice) {
                case 1: System.out.print("Enter no.of days:");
                day=sc.nextInt();
                if(cl-day>=0) {
                    cl=cl-day;
                    System.out.println("Leave Granted\t Total no. of leaves

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left:"+cl);
    }
    else System.out.println("Request exceeds the no. of leaves
available");
    break;
    case 2: System.out.print("Enter no.of days:");
    day=sc.nextInt();
    if(el-day>=0) {
        el=el-day;
        System.out.println("Leave Granted\t Total no. of leaves
left:"+el);
    }
    else System.out.println("Request exceeds the no. of leaves
available");
    break;
    case 3: break;
    default: System.out.println("Invalid choice");
    }
}
else {
    cl=10;
    el=el+(temp-yr)*10;
    System.out.print("1.Casual Leave \n2.Earned leave\n3.Back to
menu\nEnter Choice:");
    choice=sc.nextInt();
    switch(choice) {
    case 1: System.out.print("Enter no.of days:");
    day=sc.nextInt();
    if(cl-day>=0) {
        cl=cl-day;
        System.out.println("Leave Granted\t Total no. of leaves
left:"+cl);
    }
    else System.out.println("Request exceeds the no. of leaves
available");
    break;
    case 2: System.out.print("Enter no.of days:");
    day=sc.nextInt();
    if(el-day>=0) {
        el=el-day;
        System.out.println("Leave Granted\t Total no. of leaves
left:"+el);
    }
    else System.out.println("Request exceeds the no. of leaves
available");
    break;
    case 3: break;
    default: System.out.println("Invalid choice");
    }
}
}
}

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public class MainEmployee {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int choice,ch,i=0,j=0,k=0,l=0,temp;
        double id;
        Programmer p[]=new Programmer[100];
        TeamLeader tl[]=new TeamLeader[100];
        ProjectManager pm[]=new ProjectManager[100];
        AssistantProjectManager apm[]=new AssistantProjectManager[100];

        do {

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        System.out.print("1.Programmer\n2.Team Leader\n3.Project
Manager\n4.Assistant Project Manager\n5.Exit\nEnter your field :");
        choice=sc.nextInt();
        switch(choice) {
            case 1: do {
                System.out.print("1.Add Programmer\n2.Generate Pay
Slip\n3.Leave Application\n4.View Details\n5.Edit Details\n6.Back to main menu\
n\nEnter your choice :");
                ch=sc.nextInt();
                switch(ch) {
                    case 1: if(i==100)
                        System.out.println("Sorry!! No
more programmers can be added");
                        else {
                            p[i]=new Programmer();
                            i++;
                            break;
                        }
                    case 2: System.out.print("Enter Employee ID :");
                        id=sc.nextDouble();
                        for(temp=0;temp<=i;temp++) {
                            if(p[temp].check(id)) {
                                p[temp].calc();
                                p[temp].paySlip();
                                break;
                            }
                        }
                        if(temp>i) System.out.println("ID not
found");
                        break;
                    case 3: System.out.print("Enter Employee ID :");
                        id=sc.nextDouble();
                        for(temp=0;temp<=i;temp++) {
                            if(p[temp].check(id)) {
                                p[temp].Leave();
                                break;
                            }
                        }
                        if(temp>i) System.out.println("ID not
found");
                        break;
                    case 4: System.out.print("Enter Employee ID :");
                        id=sc.nextDouble();
                        for(temp=0;temp<=i;temp++) {
                            if(p[temp].check(id)) {
                                p[temp].view();
                                break;
                            }
                        }
                        if(temp>i) System.out.println("ID not
found");
                        break;
                    case 5: System.out.print("Enter Employee ID :");
                        id=sc.nextDouble();
                        for(temp=0;temp<=i;temp++) {
                            if(p[temp].check(id)) {
                                p[temp].edit();
                                break;
                            }
                        }
                        if(temp>i) System.out.println("ID not
found");
                        break;
                    case 6: break;

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        default: System.out.println("Invalid choice!!");
        }
        }while(ch!=6);
        break;
    case 2 :do {
        System.out.print("1.Add Team Leader\n2.Generate
Pay Slip\n3.Leave Application\n4.View Details\n5.Edit Details\n6.Back to main
menu\nEnter your choice :");
        ch=sc.nextInt();
        switch(ch) {
            case 1: if(i==100)
                System.out.println("Sorry!! No
more Team Leaders can be added");
                else {
                    tl[j]=new TeamLeader();
                    j++;
                    break;
                }
            case 2: System.out.print("Enter Employee ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=j;temp++) {
                        if(tl[temp].check(id)) {
                            tl[temp].calc();
                            tl[temp].paySlip();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 3: System.out.print("Enter Employee
ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=i;temp++) {
                        if(tl[temp].check(id)) {
                            tl[temp].Leave();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 4: System.out.print("Enter Employee ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=i;temp++) {
                        if(p[temp].check(id)) {
                            p[temp].view();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 5: System.out.print("Enter Employee ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=i;temp++) {
                        if(p[temp].check(id)) {
                            p[temp].edit();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;

```

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        case 6: break;
        default: System.out.println("Invalid choice!!");
    }
    }while(ch!=4);
    break;
    case 3 :do {
        System.out.print("1.Add Project Manager\
n2.Generate Pay Slip\n3.Leave Application\n4.View Details\n5.Edit details\
n6.Back to main menu\nEnter your choice :");
        ch=sc.nextInt();
        switch(ch) {
            case 1: if(i==100)
                System.out.println("Sorry!! No
more Project Managers can be added");
                    else {
                        pm[k]=new ProjectManager();
                        k++;
                        break;
                    }
            case 2: System.out.print("Enter Employee ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=k;temp++) {
                        if(pm[temp].check(id)) {
                            pm[temp].calc();
                            pm[temp].paySlip();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 3: System.out.print("Enter Employee
ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=i;temp++) {
                        if(pm[temp].check(id)) {
                            pm[temp].Leave();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 4: System.out.print("Enter Employee ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=i;temp++) {
                        if(p[temp].check(id)) {
                            p[temp].view();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 5: System.out.print("Enter Employee ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=i;temp++) {
                        if(p[temp].check(id)) {
                            p[temp].edit();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");

```

```

        break;
        case 6: break;
        default: System.out.println("Invalid choice!!");
    }
    }while(ch!=6);
    break;
    case 4 :do {
        System.out.print("1.Add Assistant Project Manager\
n2.Generate Pay Slip\n3.Leave Application\n4.Back to main menu\nEnter your
choice :");

        ch=sc.nextInt();
        switch(ch) {
            case 1: if(i==100)
                System.out.println("Sorry!! No
more Assistant Project Managers can be added");
                else {
                    apm[l]=new
AssistantProjectManager();

                    l++;
                    break;
                }
            case 2: System.out.print("Enter Employee ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=l;temp++) {
                        if(apm[temp].check(id)) {
                            apm[temp].calc();
                            apm[temp].paySlip();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 3: System.out.print("Enter Employee
ID :");
                    id=sc.nextDouble();
                    for(temp=0;temp<=i;temp++) {
                        if(apm[temp].check(id)) {
                            apm[temp].Leave();
                            break;
                        }
                    }
                    if(temp>i) System.out.println("ID not
found");
                    break;
            case 4: break;
            default: System.out.println("Invalid choice!!");
        }
    }while(ch!=4);
    break;
    case 5: break;
    default: System.out.println("Invalid choice");
}
}while(choice!=5);
}
}

```