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package A1;

/**
 *
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 */

import java.util.Scanner;

class Student{
    private int regno;
    private String name,dept;
    private float mark[]=new float[3];
    private float total;
    private char grade;

    static int create(Student stu[]){
        int n,i;
        Scanner in=new Scanner(System.in);
        System.out.println("Enter number of records: ");
        n=in.nextInt();
        for (i=0;i<n;i++){
            {
                stu[i]=new Student();
                System.out.println("Enter regno : ");
                stu[i].regno=in.nextInt();
                stu[i].name=in.nextLine();
                System.out.println("Enter name : ");
                stu[i].name=in.nextLine();
                System.out.println("Enter dept : ");
                stu[i].dept=in.nextLine();
                System.out.println("Enter mark 1: ");
                stu[i].mark[0]=in.nextFloat();
                System.out.println("Enter mark 2: ");
                stu[i].mark[1]=in.nextFloat();
                System.out.println("Enter mark 3: ");
                stu[i].mark[2]=in.nextFloat();

                stu[i].setDetail(stu[i]);
                stu[i].result();
            }
            return n;
        }

        private void setDetail(Student stu){
            this.regno=stu.regno;
            this.name=stu.name;
            this.dept=stu.dept;
            this.mark=stu.mark;
        }

        private void result(){
            total=mark[0]+mark[1]+mark[2];
            if(total>250)
                grade='A';
        }
    }
}

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        else if(total>200)
            grade='B';
        else
            grade='C';
    }

static int search(Student stu[], int regno, int n)
{
    int i;
    for (i=0;i<n;i++){
        if (stu[i].regno==regno){
            stu[i].print();
            return i;
        }
    }
    return -1;
}

static int search(Student stu[], String dept, int n)
{
    int i,count=0;
    for (i=0;i<n;i++){
        if (dept.compareTo(stu[i].dept)==0){
            stu[i].print();
            count++;
        }
    }
    return count;
}

void print(){
    System.out.println("\nRegno : "+regno);
    System.out.println("Name : "+name);
    System.out.println("Dept : "+dept);
}

static void marksheet(Student stu[],int n){
    int sregno,i;
    Scanner in=new Scanner(System.in);
    System.out.println("Enter regno: ");
    sregno=in.nextInt();

    i=Student.search(stu,sregno,n);

    if (i!=-1)
    {
        System.out.println("Mark 1: "+stu[i].mark[0]);
        System.out.println("Mark 2: "+stu[i].mark[1]);
        System.out.println("Mark 3: "+stu[i].mark[2]);
        System.out.println("_____");
        System.out.println("Total : "+stu[i].total);
        System.out.println("_____");
        System.out.println("Grade : "+stu[i].grade);
    }
}

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        else
            System.out.println("Regno does not exist!");
    }
}

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public class StuRec {

    public static void main(String[] args) {
        int n=0,i,index,count=0,choice=1;
        int sregno;
        String sdept;
        Scanner in=new Scanner(System.in);

        Student stu[]=new Student[20];

        System.out.println("Choice:\n1. Enter student details\n2.
Display Record\n3. Generate particular marksheet\n4. Search student
based on regno\n5. Search student based on department\n6.
Exit\nEnter choice: ");
        choice=in.nextInt();
        while(choice!=6){
            if (choice==1){
                n=Student.create(stu);
            }

            else if(choice==2){
                for (i=0;i<n;i++){
                    stu[i].print();
                }
            }

            else if(choice==3){
                Student.marksheet(stu,n);
            }

            else if(choice==4){
                System.out.println("Enter regno to search: ");
                sregno=in.nextInt();
                index=Student.search(stu,sregno,n);

                if (index==-1)
                    System.out.println("Regno does not exist!");
            }

            else if(choice==5){
                System.out.println("Enter dept to search: ");
                sdept=in.nextLine();
                sdept=in.nextLine();
                count=Student.search(stu, sdept, n);

                if (count==0)

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        System.out.println("Dept does not exist!");
    else
        System.out.println(count+" records found!");
    }

    System.out.println("Choice:\n1. Enter student
details\n2. Display Record\n3. Generate particular marksheet\n4.
Search student based on regno\n5. Search student based on
department\n6. Exit\nEnter choice: ");
    choice=in.nextInt();
}

}

}
```