E.B.SUWATHI[15L247]

ECE - B

JAVA MINI PROJECT

//3-D ARRAY FOR VISITORS CHECKING FOR THE YEAR

SOURCE CODE:

```
import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.io.IOException;
import java.io.FileReader;
import java.io.FileNotFoundException;
class Visit{
    public static void main(String[] args) throws
IOException,FileNotFoundException{
        BufferedReader br=new BufferedReader(new FileReader("visitor.txt"));
        BufferedReader ir=new BufferedReader(new InputStreamReader(System.in));
        int visitors[][][];
        int i, j, k, l, m;;
        visitors=new int[12][][];
        int days[]={31,29,31,30,31,30,31,30,31,30,31};
        int sum=0,count,press;
        int month,day,hour,day1,month1,hr,hr1,date,date1;
        float avgVisitor;
dayBoundary1,dayBoundary2,monthBoundary1,monthBoundary2,hourBoundary1,hourBoundary
y2;
        int totMonthSum=0, monthDayBoundary=0;
monthBoundaryDiff=0,sumBoundaryDiff=0,dayBoundaryDiff=0,hourBoundaryDiff=0,totBou
ndary=0;
        int secondBoundary=0,n;
        int totBoundSum=0,monthBoundSum=0,avgMonthBoundSum;
        for( i=0;i<days.length;i++){</pre>
            visitors[i]=new int[days[i]][24];
        for(i=0;i<visitors.length;i++){</pre>
             for( j=0;j<visitors[i].length;j++){</pre>
                 for( k=0;k<visitors[i][j].length;k++){</pre>
```

```
visitors[i][j][k]=Integer.valueOf(br.readLine());
         }
        do {
        System.out.println(" 1-->particular month 2-->particular DAY
3-->particular HOUR
                        4-->MONTH BOUNDARY \n 5-->MONTH & DAY BOUNDARY
>MONTH & DAY & HOUR BOUNDARY
                                              7-->MULTIPLE MONTH BOUNDARY \n 8-
->SINGLE MONTH & MULTIPLE DAY BOUNDARY \n 9-->MULTIPLE MONTH & HOUR & DAY
BOUNDARY 10-->ALL MULTIPLE MONTH & HOUR & DAY BOUNDARY ");
        System.out.println("\n enter the option to check");
        int option=Integer.valueOf(ir.readLine());
        switch(option) {
        case 1:
             System.out.println("\n******** PARTICULAR MONTH
             System.out.println("enter the month to check the number of visitor:
 );
              month=Integer.valueOf(ir.readLine());
             for( j=0; j<visitors[month].length; j++) {</pre>
                 for( k=0;k<visitors[month][j].length;k++){</pre>
                      sum=sum+visitors[month][j][k];
            avgVisitor=sum / days[month];
            System.out.println(" sum of visitors in particular month--->"+sum);
            System.out.println("\n");
            System.out.println("average of visitors in particular month---
 "+Math.round(avgVisitor));
            break;
        case 2:
            System.out.println("\n ********** PARTICULAR DAY ********\n
 );
            System.out.println("enter the day to check the number of visitor: ");
             day=Integer.valueOf(ir.readLine());
            for( i=0;i<visitors.length;i++){</pre>
                 for( k=0;k<visitors[i][day].length;k++){</pre>
                         sum=sum+visitors[i][day][k];
            avgVisitor=sum / 12;
            System.out.println(" sum of visitors in particular day--->"+sum);
```

```
System.out.println("\n");
            System.out.println("average of visitors in particular day---
>"+Math.round(avgVisitor));
            break;
         case 3:
            sum = 0;
            System.out.println("\n******** PARTICULAR HOUR ******** \n");
            System.out.println("enter the hour to check the number of visitor:
 );
             hour=Integer.valueOf(ir.readLine());
            for(i=0;i<visitors.length;i++){</pre>
                 for( j=0;j<visitors[i].length;j++){</pre>
                     sum=sum+visitors[i][j][hour];
            avgVisitor=sum / 24;
            System.out.println(" sum of visitors in particular month--->"+sum);
            System.out.println("\n");
            System.out.println("average of visitors in particular month---
>"+Math.round(avgVisitor));
         case 4:
            System.out.println("\n********* MONTH BOUNDARY ********\n");
            System.out.println("\n enter the month1 to check the number of
visitor : ");
            monthBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the month2 to check the number of visitor
 ");
            monthBoundary2=Integer.valueOf(ir.readLine());
            sum = 0;
            count=0;
            for( i=monthBoundary1;i<=monthBoundary2;i++){</pre>
                  for( j=0;j<visitors[i].length;j++){</pre>
                        for( k=0;k<visitors[i][j].length;k++){</pre>
                            sum=sum+visitors[i][j][k];
                     }
            totMonthSum=0;
            for(i=monthBoundary1;i<=monthBoundary2;i++){</pre>
                 totMonthSum=days[i]+totMonthSum;
                 count++;
```

```
avgVisitor=sum / (totMonthSum/count);
            System.out.println("\nsum of visitors in particular month
                                                                          :"+sum);
            System.out.println("\n");
            System.out.println("\naverage of visitors in particular month
:"+Math.round(avgVisitor));
            break;
      case 5:
            System.out.println("\n****** MONTH & DAY BOUNDARY
            System.out.println("\n enter the month1 to check the number of
visitor : ");
             monthBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the month2 to check the number of visitor
 ");
            monthBoundary2=Integer.valueOf(ir.readLine());
            System.out.println("\n enter the day1 to check the number of visitor
 ");
            dayBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the day2 to check the number of visitor
 ");
           dayBoundary2=Integer.valueOf(ir.readLine());
           totMonthSum=0;monthDayBoundary=0;
            for( i=monthBoundary1;i<=monthBoundary2;i++){</pre>
                for( j=dayBoundary1; j<=dayBoundary2; j++){</pre>
                    for( k=0;k<visitors[i][j].length;k++){</pre>
                          sum=sum+visitors[i][j][k];
                     }
            monthBoundaryDiff=0;
            sumBoundaryDiff=0;
            dayBoundaryDiff=0;
            monthBoundaryDiff+= monthBoundary2-monthBoundary1 + 1;
            dayBoundaryDiff+= dayBoundary2-dayBoundary1 + 1;
            int tot = (monthBoundaryDiff + dayBoundaryDiff )*24;
            avgVisitor=sum / tot ;
            System.out.println("\nsum of visitors in particular month
:"+sum);
            System.out.println("\naverage of visitors in particular month
:"+Math.round(avgVisitor));
            break:
```

```
case 6:
            System.out.println("\n********* MONTH & DAY & HOUR BOUNDARY
            System.out.println("\n enter the month1 to check the number of
visitor : ");
             monthBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the month2 to check the number of visitor
: ");
             monthBoundary2=Integer.valueOf(ir.readLine());
            System.out.println("\n enter the day1 to check the number of visitor
  ");
             dayBoundary1=Integer.valueOf(ir.readLine());
             System.out.println("\nenter the day2 to check the number of visitor
  ");
            dayBoundary2=Integer.valueOf(ir.readLine());
            System.out.println("\n enter the hour1 to check the number of visitor
  ");
             hourBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the hour2 to check the number of visitor
  ");
             hourBoundary2=Integer.valueOf(ir.readLine());
             totMonthSum=0;
            sum=0;count=0;
            for( i=monthBoundary1;i<=monthBoundary2;i++){</pre>
                 for( j=dayBoundary1; j<=dayBoundary2; j++){</pre>
                    for( k=hourBoundary1;k<=hourBoundary2;k++){</pre>
                           sum=sum+visitors[i][j][k];
                     }
           System.out.println(sum);
monthBoundaryDiff=0;sumBoundaryDiff=0;dayBoundaryDiff=0;hourBoundaryDiff=0;totBou
ndary=0;
           monthBoundaryDiff+= monthBoundary2 - monthBoundary1 + 1;
           dayBoundaryDiff+= dayBoundary2 - dayBoundary1 + 1;
           hourBoundaryDiff+= hourBoundary2 - hourBoundary1 + 1;
           totBoundary= monthBoundaryDiff * ( dayBoundaryDiff *
hourBoundaryDiff);
```

```
avgVisitor=sum / totBoundary ;
           System.out.println("\nsum of visitors in particular month
                                                                         :"+sum);
           System.out.println("average of visitors in particular month
:"+Math.round(avgVisitor));
           break;
        case 7:
            System.out.println("\n ********* MULTIPLE MONTH BOUNDARY
            System.out.println("\n enter the number of months for visitor
checking :");
            n =Integer.valueOf(ir.readLine());
            System.out.println("\n******** multiple boundary for
month********\n");
            secondBoundary=0; totMonthSum=0;
            count=0;
            for(1=0;1<n;1++) {
                 sum=0;
                 System.out.println("\n enter the month1 to check the number of
visitor : ");
                 monthBoundary1=Integer.valueOf(ir.readLine());
                 System.out.println("\nenter the month2 to check the number of
visitor : ");
                 monthBoundary2=Integer.valueOf(ir.readLine());
                 for( i=monthBoundary1;i<=monthBoundary2;i++){</pre>
                    for( j=0; j<visitors[i].length; j++){</pre>
                        for( k=0;k<visitors[i][j].length;k++){</pre>
                                sum=sum+visitors[i][j][k];
                    }
                secondBoundary+=sum;
                for(m=monthBoundary1;m<=monthBoundary2;m++){</pre>
                    totMonthSum=days[m]+totMonthSum;
                    count++;
                }
            avgVisitor=secondBoundary / (totMonthSum/count);
            System.out.println("\nsum of visitors in particular month
:"+secondBoundary);
            System.out.println("\naverage of visitors in particular month
:"+Math.round(avgVisitor));
            break;
        case 8:
```

```
System.out.println("\n*********** SINGLE MONTH & MULTIPLE DAY
BOUNDARY **********);
            System.out.println("\n enter the month1 to check the number of
visitor : ");
            monthBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the month2 to check the number of visitor
: ");
            monthBoundary2=Integer.valueOf(ir.readLine());
            System.out.println("\n enter the multiple number of days for visitor
checking :");
            n =Integer.valueOf(ir.readLine());
            secondBoundary=0;totBoundSum=0;monthBoundSum=0;
           for(1=0; l<n; l++) {
                System.out.println("\n********* day "+ (l+1) +" boundary
********\n");
                int daySum=0;sum=0;
                System.out.println("\n enter the day1 to check the number of
visitor : ");
                dayBoundary1=Integer.valueOf(ir.readLine());
                System.out.println("\nenter the day2 to check the number of
visitor : ");
                dayBoundary2=Integer.valueOf(ir.readLine());
                for( i=monthBoundary1;i<=monthBoundary2;i++){</pre>
                    for( j=dayBoundary1; j<=dayBoundary2; j++){</pre>
                        for( k=0;k<visitors[i][j].length;k++){</pre>
                            sum=sum+visitors[i][j][k];
                secondBoundary+=sum;
                totBoundSum+=dayBoundary2 - dayBoundary1 + 1;
            monthBoundSum=monthBoundary2 - monthBoundary1 + 1;
            avgMonthBoundSum = ( totBoundSum + monthBoundSum ) * 24;
            avgVisitor=secondBoundary / avgMonthBoundSum;
            System.out.println("\nsum of visitors in particular month & n days
"+secondBoundary);
            System.out.println("\naverage of visitors in particular month & n
days :"+Math.round(avgVisitor));
            break;
        case 9:
            System.out.println("\n********* MULTIPLE MONTH & HOUR & DAY
BOUNDARY ********\n");
```

```
System.out.println("\n enter the month1 to check the number of
visitor : ");
            monthBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the month2 to check the number of visitor
 ");
            monthBoundary2=Integer.valueOf(ir.readLine());
            System.out.println("\n enter the day1 to check the number of visitor
  ");
            dayBoundary1=Integer.valueOf(ir.readLine());
            System.out.println("\nenter the day2 to check the number of visitor
  ");
            dayBoundary2=Integer.valueOf(ir.readLine());
            System.out.println("enter n number Of hours to check");
            n=Integer.valueOf(ir.readLine());
            int h; secondBoundary=0;totBoundSum=0;
             monthBoundaryDiff=0;dayBoundaryDiff=0;totBoundary=0;
             for(h=0; h < n; h++) {
                 System.out.println("\n**********
Hour"+(h+1)+"boundary*******");
                 System.out.println("\n enter the hour1 to check the number of
visitor : ");
                 hourBoundary1=Integer.valueOf(ir.readLine());
                 System.out.println("\nenter the hour2 to check the number of
visitor : ");
                 hourBoundary2=Integer.valueOf(ir.readLine());
                 sum=0:
                for( i=monthBoundary1;i<=monthBoundary2;i++){</pre>
                     for( j=dayBoundary1;j<=dayBoundary2;j++){</pre>
                        for( k=hourBoundary1;k<=hourBoundary2;k++){</pre>
                            sum=sum+visitors[i][j][k];
                secondBoundary+=sum;
                totBoundSum+=hourBoundary2 - hourBoundary1 + 1;
            monthBoundaryDiff = monthBoundary2 - monthBoundary1 + 1;
            dayBoundaryDiff = dayBoundary2 - dayBoundary1 + 1;
            totBoundary= monthBoundaryDiff * ( dayBoundaryDiff * totBoundSum);
            avgVisitor=secondBoundary / totBoundary ;
            System.out.println("\nsum of visitors in particular month
:"+secondBoundary);
            System.out.println("\naverage of visitors in particular month
 "+Math.round(avgVisitor));
```

```
break;
        case 10:
            System.out.println("\n********* ALL MULTIPLE MONTH & HOUR & DAY
BOUNDARY ******** \n");
            System.out.println("ENTER n VALUE ");
            n=Integer.valueOf(ir.readLine());
            count=0;sum=0;
           1=0;
            float average=0;
            while (1 < n) {
                System.out.println("ENTER THE STARTING MONTH TOFIND AVERAGE");
                month=Integer.valueOf(ir.readLine());
                System.out.println("ENTER THE ENDING MONTH TO FIND AVERAGE");
                month1=Integer.valueOf(ir.readLine());
                System.out.println("ENTER THE STARTING DATE TOFIND AVERAGE");
                date=Integer.valueOf(ir.readLine());
                System.out.println("ENTER THE ENDING DATE TO FINDAVERAGE");
                date1=Integer.valueOf(ir.readLine());
                System.out.println("ENTER THE STARTING HOUR TOFIND AVERAGE");
                hr=Integer.valueOf(ir.readLine());
                System.out.println("ENTER THE ENDING HOUR TO FINDAVERAGE");
                hr1=Integer.valueOf(ir.readLine());
                for( i=month;i<month1;i++) {</pre>
                    for( j=date; j<date1; j++) {</pre>
                        for(k=hr;k<hr1;k++) {</pre>
                            sum+=visitors[i][j][k];
                            count++;
                        }
                }
                1++;
                average = sum / count;
                System.out.println("SUM OF MONTH + DATE + HOUR MULTIPLE BOUNDARY
IS:" + "\n" + sum);
                System.out.println("AVERAGE OF MONTH + DATE + HOUR
MULTIPLEBOUNDARY IS:" + "\n" + average);
                break;
            default :System.out.println("\n INVALID OPTION");
                break;
        System.out.println("PRESS 1 TO CONT..");
        press =Integer.valueOf(ir.readLine());
        }while (press == 1);}}
```

OUTPUT:

PARTICULAR MONTH:

```
C:\Users\students\Documents\visitor>java Visit
  1-->particular month
                              2-->particular DAY
                                                        3-->particular HOUR
                                                                                 4-->MONTH BOUNDARY
  5-->MONTH & DAY BOUNDARY
                              6-->MONTH & DAY & HOUR BOUNDARY
                                                                               7-->MULTIPLE MONTH BOUNDARY
  8-->SINGLE MONTH & MULTIPLE DAY BOUNDARY
  9-->MULTIPLE MONTH & HOUR & DAY BOUNDARY
                                            10-->ALL MULTIPLE MONTH & HOUR & DAY BOUNDARY
 enter the option to check
******* PARTICULAR MONTH ********
enter the month to check the number of visitor:
 sum of visitors in particular month--->54040
average of visitors in particular month--->1801 PRESS 1 TO CONT..
```

PARTICULAR DAY:

```
PRESS 1 TO CONT...
                            2-->particular DAY
                                                      3-->particular HOUR
                                                                              4-->MONTH BOUNDARY
 1-->particular month
 5-->MONTH & DAY BOUNDARY 6-->MONTH & DAY & HOUR BOUNDARY
                                                                            7-->MULTIPLE MONTH BOUNDARY
 8-->SINGLE MONTH & MULTIPLE DAY BOUNDARY
                                          10-->ALL MULTIPLE MONTH & HOUR & DAY BOUNDARY
 9-->MULTIPLE MONTH & HOUR & DAY BOUNDARY
enter the option to check
 ******* PARTICULAR DAY ********
enter the day to check the number of visitor:
sum of visitors in particular day--->75563
average of visitors in particular day--->6296
PRESS 1 TO CONT...
```

PARTICULAR HOUR

MONTH BOUNDARY:

MONTH & DAY BOUNDARY:

```
PRESS 1 TO CONT..
  1-->particular month
                           2-->particular DAY
                                                    3-->particular HOUR 4-->MONTH BOUNDARY
  5-->MONTH & DAY BOUNDARY 6-->MONTH & DAY & HOUR BOUNDARY
                                                                        7-->MULTIPLE MONTH BOUNDARY
  8-->SINGLE MONTH & MULTIPLE DAY BOUNDARY
 9-->MULTIPLE MONTH & HOUR & DAY BOUNDARY 10-->ALL MULTIPLE MONTH & HOUR & DAY BOUNDARY
 enter the option to check
****** MONTH & DAY BOUNDARY ********
 enter the month1 to check the number of visitor :
enter the month2 to check the number of visitor :
 enter the day1 to check the number of visitor :
enter the day2 to check the number of visitor :
sum of visitors in particular month :181385
average of visitors in particular month :1079
PRESS 1 TO CONT..
```

MONTH & HOUR & DAY BOUNDARY:

MULTIPLE MONTH BOUNDARY:

```
3-->particular HOUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4-->MONTH BOUNDARY
                  5-->MONTH & DAY BOUNDARY 6-->MONTH & DAY & HOUR BOUNDARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7-->MULTIPLE MONTH BOUNDARY
                8-->SINGLE MONTH & MULTIPLE DAY BOUNDARY
                9-->MULTIPLE MONTH & HOUR & DAY BOUNDARY 10-->ALL MULTIPLE MONTH & HOUR & DAY BOUNDARY
          enter the option to check
          ******* MULTIPLE MONTH BOUNDARY ********
      enter the number of months for visitor checking :
    ****** multiple boundary for month*******
      enter the month1 to check the number of visitor :
  enter the month2 to check the number of visitor :
      enter the month1 to check the number of visitor :
  enter the month2 to check the number of visitor % \left( 1\right) =\left( 1\right) \left( 1\right
  sum of visitors in particular month :327932
average of visitors in particular month :10931
```

SINGLE MONTH & MULTIPLE DAY BOUNDARY:

MULTIPLE HOUR & MONTH & DAY BOUNDARY:

```
*******************************

enter the hour1 to check the number of visitor :

a enter the hour2 to check the number of visitor :

4 

*******************************

enter the hour1 to check the number of visitor :

6 

enter the hour2 to check the number of visitor :

8 

sum of visitors in particular month :3081

average of visitors in particular month :77

PRESS 1 TO CONT...
```

ALL MULTIPLE MONTH & HOUR & DAY BOUNDARY:

```
ENTER THE ENDING HOUR TO FINDAVERAGE
7
ENTER THE STARTING MONTH TOFIND AVERAGE
5
ENTER THE ENDING MONTH TO FIND AVERAGE
7
ENTER THE STARTING DATE TOFIND AVERAGE
15
ENTER THE ENDING DATE TO FINDAVERAGE
17
ENTER THE STARTING HOUR TOFIND AVERAGE
9
ENTER THE ENDING HOUR TO FINDAVERAGE
12
SUM OF MONTH + DATE + HOUR MULTIPLE BOUNDARY IS:
965
AVERAGE OF MONTH + DATE + HOUR MULTIPLEBOUNDARY IS:
74.0
DRESS 1 TO CONT
```

DEFAULT:

```
C:\Users\students\Documents\visitor>java Visit

1-->particular month

2-->particular DAY

3-->particular HOUR

4-->MONITH BOUNDARY

5-->MONITH & DAY BOUNDARY

8-->SINGLE MONITH & MULTIPLE DAY BOUNDARY

9-->MULTIPLE MONITH & HOUR & DAY BOUNDARY

enter the option to check

12

INVALID OPTION

PRESS 1 TO CONT..
```