Lab 3 exercise

1.calendar program

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\* The class CalendarProgram inputs a year, month and the weekday name

\* of the 1st day of that month and generates its calendar

\* @author : www.guideforschool.com

\* @Program Type : BlueJ Program - Java

\*/

import java.util.\*;

class CalendarProgram

{

//Function to match the given month and return its maximum days

int findMaxDay(String mname, int y)

{

String months[] = {"","January", "February", "March", "April", "May", "June",

"July", "August", "September", "October", "November", "December"};

int D[]={0,31,28,31,30,31,30,31,31,30,31,30,31};

if((y%400==0) || ((y%100!=0)&&(y%4==0)))

{

D[2]=29;

}

int max = 0;

for(int i=1; i<=12; i++)

{

if(mname.equalsIgnoreCase(months[i]))

{

max = D[i]; //Saving maximum day of given month

}

}

return max;

}

//Function to match the given weekday name and return its weekday no.

int findDayNo(String wname)

{

String days[] = {"Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday",

"Saturday"};

int f = 0;

for(int i=0; i<7; i++)

{

if(wname.equalsIgnoreCase(days[i]))

{

f = i; //Saving week day no. given day (e.g. '0' for Sunday)

}

}

return f;

}

//Function for creating the calendar

void fillCalendar(int max, int f, String mname, int y)

{

int A[][] = new int[6][7];

int x = 1, z = f;

for(int i=0;i<6;i++)

{

for(int j=f; j<7; j++)

{

if(x<=max)

{

A[i][j] = x;

x++;

}

}

f = 0;

}

for(int j=0; j<z; j++) //Adjustment to bring last (6th) row elements to first row

{

A[0][j]=A[5][j];

}

printCalendar(A, mname, y); //Calling function to print the calendar

}

//Function for printing the calendar

void printCalendar(int A[][], String mname, int y)

{

System.out.println("\n\t----------------------------------------------------");

System.out.println("\t\t\t "+mname+" "+y);

System.out.println("\t----------------------------------------------------");

System.out.println("\tSUN\tMON\tTUE\tWED\tTHU\tFRI\tSAT");

System.out.println("\t----------------------------------------------------");

for(int i = 0; i < 5; i++)

{

for(int j = 0; j < 7; j++)

{

if(A[i][j]!=0)

System.out.print("\t "+A[i][j]);

else

System.out.print("\t ");

}

System.out.println("\n\t----------------------------------------------------");

}

}

public static void main(String args[])

{

CalendarProgram ob = new CalendarProgram();

Scanner sc = new Scanner(System.in);

System.out.print("Enter the year : ");

int y = sc.nextInt();

System.out.print("Enter the month name (e.g. January) : ");

String mname = sc.next();

System.out.print("Enter the week day name (e.g. Sunday) of 1st day of "+mname+" : ");

String wname = sc.next();

int max = ob.findMaxDay(mname,y);

int f = ob.findDayNo(wname);

ob.fillCalendar(max,f,mname,y);

}

}

2.Minimum of four numbers

package lab3;

import java.util.Scanner;

//\*\*

\*

\* @author velmurugan

\*/

public class minof4{

public static void main(String[] args){

Scanner obj=new Scanner(System.in);

System.out.println(“Enter the terms “);

int a=obj.nextInt();

int b=obj.nextInt();

int c=obj.nextInt();

int d=obj.nextInt();

int e;

e=(a>b && a<c && a<d)?a:(b<c && b<d)?b:(c<d)?c:d;

System.out.println(“The minimum number is “ +e);

}

3.Preparing counter function using static and non static variable

package lab3;

import java.util.Scanner;

//\*\*

\*

\* @author velmurugan

\*/

public class staticvariable{

public static void main(String[] args){

program obj=new program();

System.out.println(“Sample:1”);

obj.pro();

program obj1=new program();

System.out.println(“Sample:2”);

obj1.pro();

program obj2=new program();

System.out.println(“Sample:3”);

obj2.pro();

}

}

class program

{

static int a=50;//static variable

int b=10;// normal variable

void pro

{

a=a\*50;

b=b\*50;

System.out.println(a);

System.out.println(b);

}

}