Package:

package mypackage;

import java.util.\*;

import java.lang.\*;

/\*\* class representing the Date class in util and its functionalities using mydate

\* @author vaishnavi

\*/

public class myDatee

{

Date d1=new Date();

public int day,month;

public int date,year,hours,min,sec;

public String mon,dayy;

Scanner in=new Scanner(System.in);

/\*\* default constructor initialising date as system date

\*/

public myDatee()

{

day=d1.getDay();

dayy=getDay();

date=d1.getDate();

month=d1.getMonth();

mon=getMonth();

year=d1.getYear();

hours=d1.getHours();

min=d1.getMinutes();

sec=d1.getSeconds();

}

/\*\* explicit constructor initialising date and time.

\* @param da day

\* @param d date

\* @param m month

\* @param y year

\* @param h hours

\* @param m minutes

\* @param s seconds

\*/

public myDatee(int da,int d,int m,int y,int h,int mn,int s)

{

day=da;

date=d;

month=m;

year=y;

hours=h;

min=mn;

sec=s;

}

/\*\* explicit constructor initialising date and time.

\* @param d date

\* @param m month

\* @param y year

\*/

public myDatee(int d,int m,int y)

{

date=d;

month=m;

year=y;

}

/\*\* A method that returns the day

\* @return String

\*/

public String getDay()

{

switch (day)

{

case 0: return("Sunday");

case 1: return("Monday");

case 2: return("Tueday");

case 3: return("Wednesday");

case 4: return("Thursday");

case 5: return("Friday");

case 6: return("Saturday");

default : return("blah");

}

}

/\*\* A method that returns the date

\* @return int

\*/

public int getDate()

{

return date;

}

/\*\* A method that returns the month

\* @return String

\*/

public String getMonth()

{

switch (month)

{

case 0: return("Jan");

case 1: return("Feb");

case 2: return("March");

case 3: return("Apr");

case 4: return("May");

case 5: return("june");

case 6: return("july");

case 7: return("Aug");

case 8: return("Sept");

case 9: return("Oct");

case 10: return("Nov");

case 11: return("Dec");

default : return("blah");

}

}

/\*\* A method that returns the year

\* @return int

\*/

public int getYear()

{

return year;

}

/\*\* A method to get the Date

\* @return void

\*/

public void getFullDate()

{

System.out.println("\nThe Full Date is :- "+date+" , "+mon+" , "+(year+1900)+" , "+dayy);

}

/\*\* A method to set the day

\* @param da day

\* @return void

\*/

public void setDay(int da)

{

day=da;

}

/\*\* A method to set the date

\* @param d date

\* @return void

\*/

public void setDate(int d)

{

date=d;

}

/\*\* A method to set the year

\* @param y year

\* @return void

\*/

public void setYear(int y)

{

year=y;

}

/\*\* A method to set the month

\* @param m month

\* @return void

\*/

public void setMonth(int m)

{

month=m;

}

/\*\* A method to set the Date

\* @return void

\*/

public void setFullDate()

{

System.out.print("\nEnter Day : ");

day=in.nextInt();

System.out.print("\nEnter Month : " );

month=in.nextInt();

System.out.print("\nEnter Year : ");

year=in.nextInt();

}

/\*\* A method to get the hours

\* @return int

\*/

public int getHours()

{

return hours;

}

/\*\* A method to get the minutes

\* @return int

\*/

public int getMinutes()

{

return min;

}

/\*\* A method to get the seconds

\* @return int

\*/

public int getSeconds()

{

return sec;

}

/\*\* A method to get the Time

\* @return void

\*/

public void getTime()

{

System.out.println("\nThe Time is :- "+hours+" : "+min+" : "+sec);

}

/\*\* A method to set the hours

\* @param h hours

\* @return void

\*/

public void setHours(int h)

{

hours=h;

}

/\*\* A method to set the minutes

\* @param m minutes

\* @return void

\*/

public void setMinutes(int m)

{

min=m;

}

/\*\* A method to set the seconds

\* @param s seconds

\* @return void

\*/

public void setSeconds(int s)

{

sec=s;

}

/\*\* A method to set the Time

\* @return void

\*/

public void setTime()

{

System.out.print("\nEnter Hours : ");

hours=in.nextInt();

System.out.print("\nEnter Minutes : " );

min=in.nextInt();

System.out.print("\nEnter Seconds : ");

sec=in.nextInt();

}

/\*\* A method to check whether the dates are equal or not

\* @param d object of myDate

\* @return int

\*/

public int equals(myDatee d)

{

if((d.year==year)&&(d.month==month)&&(d.date==date))

return 1;

else

return 0;

}

/\*\* A method to check whether a date is after a specified date

\* @param d object of myDate

\* @return int

\*/

public int after(myDatee d)

{

if(year<=d.year)

if(month<=d.month)

if(date<=d.date)

return 0;

return 1;

}

/\*\* A method to check whether a date is before a specified date

\* @param d object of myDate

\* @return int

\*/

public int before(myDatee d)

{

if(year>=d.year)

if(month>=d.month)

if(date>=d.date)

return 0;

return 1;

}

/\*\* A method to compare two dates

\* @param d object of myDate

\* @return int

\*/

public int compareTo(myDatee d)

{

if((d.year==year)&&(d.month==month)&&(d.date==date))

return 0;

else

{

if((year>d.year)||((year==d.year)&&(month>d.month))||((year==d.year)&&(month==d.month)&&(date>d.date)))

return 1;

else

return -1;

}

}

/\*\* A method to convert a date object to a String

\* @return String

\*/

public String toString()

{

dayy=getDay();

mon=getMonth();

String s=dayy+", "+date+"-"+mon+"-"+(year+1900)+" "+hours+":"+min+":"+sec;

return s;

}

}

Main program:

import mypackage.myDatee;

import java.text.\*;

import java.util.\*;

/\*\* class representing date functionalities

\* @author vaishnavi

\*/

public class myDateProg{

/\*\* Static method representing the Get and Set functions present in Date class

\* @param choice - GET/SET choice

\* @param d - object of class myDate

\* @return void

\*/

public static void subMenu(int choice,myDatee d)

{ int ch=0;

while(ch!=10)

{

if(choice==1)

System.out.println("\n GET VALUES");

else

System.out.println("\n SET VALUES");

System.out.println("\nSUB MENU");

System.out.println("1. Day");

System.out.println("2. Date ");

System.out.println("3. Month");

System.out.println("4. Year");

System.out.println("5. Hours");

System.out.println("6. Minutes");

System.out.println("7. Seconds");

System.out.println("8. Time");

System.out.println("9. Date");

System.out.println("10. EXIT");

System.out.print("Your Choice Is : ");

Scanner in= new Scanner(System.in);

ch=in.nextInt();

switch(ch)

{

case 1: if(choice==1)

System.out.println("\nDay is : "+d.getDay());

else

{ int day;

System.out.print("\nEnter Day : ");

day=in.nextInt();

d.setDay(day);

}

break;

case 2: if(choice==1)

System.out.println("\nDate is : "+d.getDate());

else

{ int date;

System.out.print("\nEnter Date : ");

date=in.nextInt();

d.setDate(date);

}

break;

case 3: if(choice==1)

System.out.println("\nMonth is : "+d.getMonth());

else

{ int mon;

System.out.print("\nEnter Month : ");

mon=in.nextInt();

d.setMonth(mon);

}

break;

case 4: if(choice==1)

System.out.println("\nYear is : "+(d.getYear()+1900));

else

{ int year;

System.out.print("\nEnter Year : ");

year=in.nextInt();

d.setYear(year);

}

break;

case 5: if(choice==1)

System.out.println("\nHours is : "+d.getHours());

else

{ int hours;

System.out.print("\nEnter Hours : ");

hours=in.nextInt();

d.setHours(hours);

}

break;

case 6: if(choice==1)

System.out.println("\nMinutes is : "+d.getMinutes());

else

{ int min;

System.out.print("\nEnter Minutes : ");

min=in.nextInt();

d.setMinutes(min);

}

break;

case 7: if(choice==1)

System.out.println("\nSeconds is : "+d.getSeconds());

else

{ int sec;

System.out.print("\nEnter Seconds : ");

sec=in.nextInt();

d.setSeconds(sec);

}

break;

case 8: d.getTime();

break;

case 9: d.getFullDate();

break;

case 10 : break;

}

}

}

/\*\* Static method representing the equals(),before(),after() and compareTo() functionalities of Date class

\* @param ch - equals/before/after/compareTo choice made

\* @return void

\*/

public static void checkAndCompare(int ch)

{

int d,m,y,d1,m1,y1;

Scanner in=new Scanner(System.in);

System.out.print("\nEnter Date1 ");

System.out.print("\nDate (dd) : ");

d=in.nextInt();

System.out.print("Month (mm) : ");

m=in.nextInt();

System.out.print("Year (yyyy) : ");

y=in.nextInt();

System.out.print("\nEnter Date2 ");

System.out.print("\nDate (dd) : ");

d1=in.nextInt();

System.out.print("Month (mm) : ");

m1=in.nextInt();

System.out.print("Year (yyyy) : ");

y1=in.nextInt();

/\*\* Initialising Date1 and Date2 .

\* Calls parameterized constructor with 3 arguments.

\*/

myDatee date1=new myDatee(d,m,y);

myDatee date2=new myDatee(d1,m1,y1);

System.out.println("\nDATE 1 : "+date1.date+"-"+date1.month+"-"+date1.year);

System.out.println("DATE 2 : "+date2.date+"-"+date2.month+"-"+date2.year);

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

if(ch==3) // checks for eqality

{

if(date1.equals(date2)==1)

System.out.println("\nDate1 IS EQUAL TO Date2 : ");

else

System.out.println("Date1 IS NOT EQUAL TO Date2 ");

}

else if(ch==4) // checks for after

{

if(date1.after(date2)==1)

System.out.println("\nDate1 COMES AFTER Date2!!");

else

System.out.println("\nDate1 DOESNOT COME AFTER Date1!!");

}

else if(ch==5) // checks for before

{

if(date1.before(date2)==1)

System.out.println("\nDate1 COMES BEFORE Date2!!");

else

System.out.println("\nDate1 DOESNOT COME BEFORE Date2!!");

}

else // compares the two dates

{

int retval=date1.compareTo(date2);

if(retval==0)

System.out.println("\nDate1 and Date2 Are Equal!!");

else if(retval>0)

System.out.println("\nDate1 is greater than Date2!!");

else

System.out.println("\nDate2 is greater than Date1!!");

}

}

/\*\* Main method

\* @param args of type string

\* @return void

\*/

public static void main(String a[])

{

int ch=0;

myDatee d = new myDatee(); //Instantiating a object of class Date

while(ch!=8){

System.out.println("\n\n\tMYDATE FUNCTIONALITIES\n");

System.out.println("MAIN MENU");

System.out.println("1. Get Values ");

System.out.println("2. Set Values ");

System.out.println("3. Check Equal ");

System.out.println("4. Check After ");

System.out.println("5. Check Before ");

System.out.println("6. Compare To ");

System.out.println("7. toString ");

System.out.println("8. EXIT ");

System.out.print("Your Choice is : ");

Scanner in=new Scanner(System.in); //Instantiating a Scanner object

ch=in.nextInt();

switch(ch)

{

case 1: subMenu(ch,d);

break;

case 2: subMenu(ch,d);

break;

case 3:

checkAndCompare(ch);

break;

case 4:

checkAndCompare(ch);

break;

case 5:

checkAndCompare(ch);

break;

case 6: checkAndCompare(ch);

break;

case 7:

/\*\* Initialising Date1 and Date2 .

\* Calls parameterized constructor with 7 arguments.

\*/

{ int day,dd,mm,yy,h,min,sec;

System.out.print("\nEnter Date1 ");

System.out.print("\nDay : ");

day=in.nextInt();

System.out.print("Date (dd) : ");

dd=in.nextInt();

System.out.print("Month (mm) : ");

mm=in.nextInt();

System.out.print("Year (yyyy) : ");

yy=in.nextInt();

System.out.print("Hours : ");

h=in.nextInt();

System.out.print("Minutes : ");

min=in.nextInt();

System.out.print("Seconds : ");

sec=in.nextInt();

myDatee date=new myDatee(day,dd,mm,yy,h,min,sec);

String s=date.toString();

System.out.print("Date In String Form : "+s);

}

break;

case 8:

{

myDatee date=new myDatee();

String s=date.toString();

break;

}

}

}

}

}

Microsoft Windows [Version 6.1.7601]

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C:\Users\dell>cd..

C:\Users>cd..

C:\>cd java

C:\java>set path=%path%;C:\java\Java\jdk1.7.0\_21\bin

C:\java>javac myDateProg.java

C:\java>java myDateProg

MYDATE FUNCTIONALITIES

MAIN MENU

1. Get Values

2. Set Values

3. Check Equal

4. Check After

5. Check Before

6. Compare To

7. toString

8. EXIT

Your Choice is : 4

Enter Date1

Date (dd) : 1

Month (mm) : 1

Year (yyyy) : 2001

Enter Date2

Date (dd) : 31

Month (mm) : 12

Year (yyyy) : 2001

DATE 1 : 1-1-2001

DATE 2 : 31-12-2001

Date1 DOESNOT COME AFTER Date1!!

MYDATE FUNCTIONALITIES

MAIN MENU

1. Get Values

2. Set Values

3. Check Equal

4. Check After

5. Check Before

6. Compare To

7. toString

8. EXIT

Your Choice is : 5

Enter Date1

Date (dd) : 1

Month (mm) : 1

Year (yyyy) : 2001

Enter Date2

Date (dd) : 31

Month (mm) : 12

Year (yyyy) : 2001

DATE 1 : 1-1-2001

DATE 2 : 31-12-2001

Date1 COMES BEFORE Date2!!

MYDATE FUNCTIONALITIES

MAIN MENU

1. Get Values

2. Set Values

3. Check Equal

4. Check After

5. Check Before

6. Compare To

7. toString

8. EXIT

Your Choice is : 6

Enter Date1

Date (dd) : 1

Month (mm) : 1

Year (yyyy) : 2001

Enter Date2

Date (dd) : 31

Month (mm) : 12

Year (yyyy) : 2001

DATE 1 : 1-1-2001

DATE 2 : 31-12-2001

Date2 is greater than Date1!!

MYDATE FUNCTIONALITIES

MAIN MENU

1. Get Values

2. Set Values

3. Check Equal

4. Check After

5. Check Before

6. Compare To

7. toString

8. EXIT

Your Choice is : 7

Enter Date1

Day : 5

Date (dd) : 28

Month (mm) : 6

Year (yyyy) : 2013

Hours : 24

Minutes : 3

Seconds : 6

Date In String Form : Friday, 28-july-3913 24:3:6

MYDATE FUNCTIONALITIES

MAIN MENU

1. Get Values

2. Set Values

3. Check Equal

4. Check After

5. Check Before

6. Compare To

7. toString

8. EXIT

Your Choice is :