BOX

class Box{

private double width;

private double height;

private double length;

public Box(double w, double h, double l)

{

width =w; height=h;length=l;

}

public Box(){

width=-1;height=-1;length=-1;

}

double volume(){

return width\* height\*length;

}

}

class BoxWeight extends Box

{

double weight;

BoxWeight(double w, double h, double l,double we){

super(w,h,l);// call super class parameterized constructor

weight=we;

}

BoxWeight(){

super();//call base class default

}

}

public class Main{

public static void main(String[] args){

BoxWeight b1=new BoxWeight(2.9,4.5,2.6,7.8);

BoxWeight b2=new BoxWeight();

double d=b1.volume();

System.out.println("Volume of b1= "+d);

d=b2.volume();

System.out.println("Volume of b2= "+d);

}

}

DATE

class Date

{

int month , day ,year;

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

{

if (m < 13 && d< 32)

{

month = m; day = d ; year = y;

}

else

System.out.println("incorrect date");

}

void setMonth (int m){

if (m < 13)

month = m;

else

System.out.println("incorrect month");

}

void setDay (int d)

{

if(d< 32)

day = d;

else

System.out.println("incorrect day");

}

void setYear(int y){

int chk = y /1000;

if(y == 0)

year = y;

else

System.out.println("incorrect year");

}

int getMonth(){

return month;

}

int getDay(){

return day;

}

int getYear(){

return year;

}

void displayDate(){

System.out.println(month + "/" + day + "/" + year);

}

}

public class Main{

public static void main (String[] args) {

Date d = new Date(9,15,2020);

d.displayDate();

d.setMonth(10);

d.setDay(12);

d.setYear(2030);

d.displayDate();

System.out.println("month = " +d.getMonth());

}

}

SAVINGS ACCOUNT

class SavingsAccount{

static float AnnualInterestrate = (float)4.0;

private float SavingsBalance;

void caluclateMonthlyInterest(){

float intrest = ((SavingsBalance\*AnnualInterestrate)/12);

SavingsBalance+=intrest;

System.out.println("balance is " + SavingsBalance);

}

static void ModifyInterestrate(float rate){

AnnualInterestrate=rate;

}

public SavingsAccount(float balance){

SavingsBalance=balance;

}

}

public class Main

{

public static void main(String[] args) {

SavingsAccount sa1 = new SavingsAccount(2000.0f);

SavingsAccount sa2 = new SavingsAccount(3000.0f);

sa1.caluclateMonthlyInterest();

sa2.caluclateMonthlyInterest();

SavingsAccount.ModifyInterestrate(5.0f);

sa1.caluclateMonthlyInterest();

sa2.caluclateMonthlyInterest();

}

}