import java.io.\*;

import java.util.\*;

//y=Mx+b;

class Records

{

double attr1;

double attr2;

}

public class prog

{

static Records[] rc=new Records[10];

public static void main(String args[]) throws FileNotFoundException,IOException

{

double M=-1000;

double B=-1000;

//y=5x+2

double mean\_x=0,mean\_y=0,cov\_xy=0,var\_x=0;

//double[] x = { 1, 2, 3, 4, 5, 6, 7, 8 };

//double[] y = { 7,12,17,22,27,32,37,42};

//double[] x={};

//double[] y ={};

int j=0;

BufferedReader CSV=new BufferedReader(new FileReader("data.csv"));

String data=CSV.readLine();

data=CSV.readLine();

System.out.println("Dataset:");

while(data!=null)

{

rc[j]=new Records();

String[] dataArray=data.split(",");

rc[j].attr1=Double.parseDouble(dataArray[0]);

rc[j].attr2=Double.parseDouble(dataArray[1]);

System.out.println(rc[j].attr1+" "+rc[j].attr2);

data=CSV.readLine();

j++;

}

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

{

mean\_x = mean\_x+rc[i].attr1;

mean\_y = mean\_y+rc[i].attr2;

}

mean\_x = mean\_x/j;

mean\_y = mean\_y/j;

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

{

var\_x += Math.pow(rc[i].attr1 - mean\_x, 2);

cov\_xy += (rc[i].attr1 - mean\_x) \* (rc[i].attr2 - mean\_y);

}

var\_x = var\_x/10;

cov\_xy = cov\_xy/10;

M = cov\_xy/var\_x;

B = mean\_y-M\*mean\_x;

System.out.println("enter the value for x");

Scanner in = new Scanner(System.in);

double r = in.nextInt();

double res = r\*M+B;

System.out.println("Predicted output for "+r+" : "+res);

}

}