**JAVA PROGRAMMING**

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**Problem**

**People buy and sell stocks. Often they buy the same stock at different prices at different times. For example, a person owns 1000 shares of a certain stock. She/he may have bought the stock in amounts of 100 shares over 10 different times with different prices each time. She / he need to analyze the profit or last made by using the following accounting method: The price of a commodity is averaged starting with the first purchase of that item. Say we sell 250 shares of a stock, and then according to this method the purchase price is determined by averaging the prices of the first 250 shares bought.  Design and develop an application in Java that can calculate the profit / loss of the transaction using the above accounting method. The user should be able to enter information about various stocks; the amount of shares bought each time and their corresponding price of the shares.**

**For example, HDFC 100 102.5 100 108.3 25 115.7 50 112.4 25 100.7 100 109.4 100 104.2 100 123.7**

**Meaning that the user has bought HDFC stock, first time 100 shares at the price of INR 102.5, second time 100 shares at INR 108.3 and so on.**

**Your application should be able to print the profit / loss made by the individual as the user enters the number of shares sold and the price of each share of a particular stock. For example, the application should print the profit/loss made by the person when he sells 200 shares of HDFC stock at INR 117.18 each.**

**Code**

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package stock;

import java.util.Scanner;

public class Stock {

int q;

double p;

Stock(int qty,double price)

{q=qty;

p=price;

}

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter the times stock purchased");

int t=sc.nextInt();

int i;

Stock[] sobj=new Stock[t];

for(i=0;i<t;i++)

{

System.out.println("Enter the number of stocks purchased at time "+(i+1));

int num=sc.nextInt();

System.out.println("Enter the price of each stock");

double pr=sc.nextDouble();

sobj[i]=new Stock(num,pr);

}

System.out.println("Stocks purchased :");

for(i=0;i<t;i++)

{

System.out.println(sobj[i].p+" "+sobj[i].q);

}

System.out.println("Enter the number of stocks to be sold");

int ts=sc.nextInt();

int ts2=ts;

System.out.println("Enter the price at which each stock is to be sold");

double sp=sc.nextDouble();

double sp2=sp\*ts;

System.out.println("Total selling price is "+sp2);

double cp=0.0;

int j=0,cs=0;

while(ts>0)

{

int ns=sobj[j].q;

if(ts>=ns)

{

cp=cp+sobj[j].p\*ns;

cs=cs+ns;

ts=ts-ns;

j++;

}

else

{ int req=ns-ts;

cp=cp+sobj[j].p\*req;

cs=cs+req;

ts=ts-req;

j++;

}

}

double acp=cp/cs;

System.out.println("Avearge cost price of "+ts2+" stocks is "+acp);

double cp2=acp\*ts2;

System.out.println("Total cost price is "+cp2);

System.out.println("Total selling price is "+sp2);

double diff=sp2-cp2;

if(diff>0)

{

System.out.println("Profit : "+diff);

}

else

{ double l=-1\*diff;

System.out.println("Loss: "+diff);

}

}

}

**Output**

run:

run:

Enter the times stock purchased

10

Enter the number of stocks purchased at time 1

100

Enter the price of each stock

102.5

Enter the number of stocks purchased at time 2

100

Enter the price of each stock

108.3

Enter the number of stocks purchased at time 3

25

Enter the price of each stock

112

Enter the number of stocks purchased at time 4

50

Enter the price of each stock

76

Enter the number of stocks purchased at time 5

100

Enter the price of each stock

112

Enter the number of stocks purchased at time 6

100

Enter the price of each stock

150

Enter the number of stocks purchased at time 7

25

Enter the price of each stock

55

Enter the number of stocks purchased at time 8

50

Enter the price of each stock

100

Enter the number of stocks purchased at time 9

25

Enter the price of each stock

65

Enter the number of stocks purchased at time 10

25

Enter the price of each stock

122

Stocks purchased :

102.5 100

108.3 100

112.0 25

76.0 50

112.0 100

150.0 100

55.0 25

100.0 50

65.0 25

122.0 25

Enter the number of stocks to be sold

200

Enter the price at which each stock is to be sold

117.18

Total selling price is 23436.0

Avearge cost price of 200 stocks is 105.4

Total cost price is 21080.0

Total selling price is 23436.0

Profit : 2356.0

BUILD SUCCESSFUL (total time: 1 minute 30 seconds)

**Screenshot**



