1. Write a program in Java to accept the details of 10 Students. Display the total count of students who are eligible for taking admission in Graduation 1st Year if age is greater than 18.

Details will be

studentName

StudentAge

package student;

import java.util.\*;

public class STUDENT {

String sname;

int sage;

//initialize

void accept(String name,int age)

{

sname=name;

sage=age;

}

public static void main(String[] args) {

//declare object array

STUDENT[] st = new STUDENT[10];

int age,count=0;

String name;

//creating scanner object

Scanner sc=new Scanner(System.in);

for(int i=0;i<10;i++)

{

//real allocation for object array

st[i]=new STUDENT();

}

for(int i=0;i<10;i++)

{

System.out.println("Enter the student name and age");

name=sc.next();

age=sc.nextInt();

st[i].accept(name, age);

if(st[i].sage>18)

{

count++;

}

}

System.out.println("The number of siudents:"+count);

}

}

Output:

Enter the student name and age

Ganesha

18

Enter the student name and age

deepika

17

Enter the student name and age

sabitha

18

Enter the student name and age

sakthi

23

Enter the student name and age

laxmi

23

Enter the student name and age

surender

12

Enter the student name and age

sabi

12

Enter the student name and age

sri

14

Enter the student name and age

kalaivani

16

Enter the student name and age

easwar

15

The number of siudents:2

2. Write a program in Java to accept the details of 10 Employees. Display the total bonus given to the employees during festival season. Bonus Criteria is given below.

if Salary is . 10000 Bonus will be 30%

if Salary is . 50000 Bonus will be 20%

if Salary is . 100000 Bonus will be 10%

Details will be : EmployeeName : EmployeeSalary

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

package employeedetail;

import java.util.\*;

public class EmployeeDetail {

String ename;

double salary,bonus;

void accept(String name,double salary)

{

ename=name;

this.salary=salary;

}

void display()

{

System.out.println("name:"+ename+"salary="+salary);

}

double calculate()

{

display();

if(salary==10000)

{

bonus=salary\*30/100;

return bonus;

}

else if(salary==50000)

{

bonus=salary\*20/100;

return bonus;

}

else if(salary==100000)

{

bonus=salary\*10/100;

return bonus;

}

else

{

bonus=0;

return bonus;

}

}

public static void main(String[] args) {

EmployeeDetail[] e=new EmployeeDetail[10];

Scanner sc=new Scanner(System.in);

String name;

double sal,total\_bonus=0;

for(int i=0;i<10;i++)

{

e[i]=new EmployeeDetail();

}

for(int i =0 ;i<10;i++)

{

System.out.println("Enter the details");

name= sc.next();

sal=sc.nextInt();

e[i].accept(name, sal);

}

for(int i=0;i<10;i++)

{

total\_bonus=total\_bonus+e[i].calculate();

}

System.out.println("The total bonus amount is:"+total\_bonus);

}

}

Output:

Enter the details

Ganesha

100000

Enter the details

deepika

100000

Enter the details

sabi

100000

Enter the details

fgd

50000

Enter the details

kjl

10000

Enter the details

ngf

50000

Enter the details

tyr

100000

Enter the details

nbv

50000

Enter the details

mnv

100000

Enter the details

bnvv

50000

The total bonus amount is:93000.0

3. Write a program using array to accept 10 numbers and display the numbers in ascending order.

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package arrayascending;

import java.util.\*;

public class ArrayAscending {

int[] a=new int[10];

int i=0;

int[] oa=new int[10];

void get()

{

Scanner sc=new Scanner(System.in);

System.out.println("enter your data");

for(i=0;i<10;i++)

{

a[i]=sc.nextInt();

}

}

void display()

{

Arrays.sort(a);

for(int i=0;i<10;i++)

{

System.out.print(a[i]+" ");

}

}

public static void main(String[] args) {

ArrayAscending s=new ArrayAscending();

s.get();

System.out.println("the sorted array;");

s.display();

}

}

Output:

enter your data

5

9

8

7

3

4

2

0

1

6

the sorted array;

0 1 2 3 4 5 6 7 8 9

4. Write a program to accept 10 number using array and display the sum and average of 10 numbers.

package arraysample;

import java.util.\*;

public class ArraySample {

int[] a=new int[10];

int i=0;

void get()

{

Scanner sc=new Scanner(System.in);

System.out.println("enter your data");

for(i=0;i<10;i++)

{

a[i]=sc.nextInt();

}

}

void display()

{

int sum=0;

double average=0.0;

for(int i =0;i<10;i++)

{

sum+=a[i];

}

average=sum/10;

System.out.println("Sum:"+sum+" Average"+average);

}

public static void main(String[] args) {

ArraySample as=new ArraySample();

as.get();

as.display();

}

}

Output:

enter your data

5

56

67

23

12

56

99

89

07

70

Sum:484 Average48.0

5. Write a program to accept marks of 10 students using array and display the name of highest scorer.

package highestmark;

import java.util.\*;

public class HighestMark {

double mark;

String name;

void accept()

{

Scanner sc=new Scanner(System.in);

name=sc.next();

mark=sc.nextDouble();

}

public static void main(String[] args) {

HighestMark[] hm=new HighestMark[10];

for(int i=0;i<10;i++)

{

hm[i]=new HighestMark();

}

for(int i=0;i<10;i++)

{

hm[i].accept();

}

String hname=hm[0].name;

double d =hm[0].mark;

for(int i=1;i<10;i++)

{

if(d<hm[i].mark)

{

d=hm[i].mark;

hname=hm[i].name;

}

}

System.out.println("the student who get highest mark is"+hname);

}

}

Output:

xyz

99.6

abc

98.99

bcd

98.77

cde

99.5

efg

96.99

fgh

99.1

ghj

90.99

jkl

99.5

klm

95.90

mno

96.7

the student who get highest mark isxyz

6. Write a java program to accept a number of any digit and reverse the numbers..

package reversenumber;

import java.util.\*;

public class ReverseNumber {

long a;

long b=0;

void get()

{

Scanner sc=new Scanner(System.in);

a=sc.nextLong();

}

void job()

{

while(a>0)

{ long r=a%10;

a=a/10;

b=(b\*10)+r;

}

}

public static void main(String[] args) {

ReverseNumber d=new ReverseNumber();

d.get();

d.job();

System.out.println(d.b);

}

}

Output:

4563

3654

7. Write a menu driven program for calculator using Java Language. Menu Details are mentioned below :-

1. Addition

2. Substraction

3. Multiplication

4. Division

5. Percentage

6. Exit

package switchprogram;

import java.util.\*;

public class SwitchProgram {

double a,b,ans;

String choice;

void calculate(double c,double d,String ch)

{

a=c;

b=d;

choice=ch;

switch(choice)

{

case "Addition":

ans=a+b;

System.out.println(a+"+"+b+"="+ans);

break;

case "Subraction":

ans=a-b;

System.out.println(a+"-"+b+"="+ans);

break;

case "Multiplication":

ans=a\*b;

System.out.println(a+"\*"+b+"="+ans);

break;

case "Division":

ans=a/b;

System.out.println(a+"/"+b+"="+ans);

break;

case "Percentage":

ans=((a/b)\*100);

System.out.println(a+"%"+b+"="+ans);

break;

case "Exit":

break;

}

}

public static void main(String[] args) {

SwitchProgram s=new SwitchProgram();

double x,y;

String choi;

System.out.println("Enter two numbers");

Scanner sc=new Scanner(System.in);

x=sc.nextDouble();

y=sc.nextDouble();

choi=sc.next();

s.calculate(x,y,choi);

}

}

Output:

Enter two numbers

12

13

Addition

12.0+13.0=25.0

8. Write a Java Program to accept the Name and Salary of five employees using array variable and perform below task.

1. Display the name of employee who is getting paid highest

2. Display the name of employee who is getting paid Lowest

3. Display the Average Salary of Employees.

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package empsalary;

import java.util.\*;

public class EmpSalary {

String ename;

double salary;

void get()

{

Scanner sc=new Scanner(System.in);

ename=sc.next();

salary=sc.nextInt();

}

public static void main(String[] args) {

EmpSalary[] e=new EmpSalary[5];

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

{

e[i]=new EmpSalary();

}

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

{

e[i].get();

}

double Highpaid=e[0].salary,Lowpaid=e[0].salary,avg=0.0;

String Hname=e[0].ename,Lname=e[0].ename;

for(int i=1;i<5;i++)

{

if(Highpaid<e[i].salary)

{

Highpaid=e[i].salary;

Hname=e[i].ename;

}

if(Lowpaid>e[i].salary)

{

Lowpaid=e[i].salary;

Lname=e[i].ename;

}

double tot=0.0;

tot=tot+e[i].salary;

avg=tot/i;

}

System.out.println("the employee get highest salary is:"+Hname);

System.out.println("the employee get lowest salary is:"+Lname);

System.out.println("the average salary is:"+avg);

}

}

Output:

xyz

10000

yxa

50000

dft

80000

jhh

765000

kmhf

79000

the employee get highest salary is:jhh

the employee get lowest salary is:xyz

the average salary is:19750.0

9. Write a Java Program to display matrix of 3 rows and 3 columns.

package matrixsample;

import java.util.\*;

public class MatrixSample {

int[][] mat=new int[3][3];

int i,j;

void get()

{

Scanner sc=new Scanner(System.in);

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

mat[i][j]=sc.nextInt();

}

}

}

void display()

{

System.out.println("The array is:");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

System.out.print(" "+mat[i][j]);

}

System.out.println();

}

}

public static void main(String[] args) {

MatrixSample m=new MatrixSample();

m.get();

m.display();

}

}

Output:

1

2

3

3

4

5

6

6

7

The array is:

1 2 3

3 4 5

6 6 7

10. Write a Java Program to add 2 matrices of 3 rows and 3 columns.

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package matrixaddition;

import java.util.\*;

public class MatrixAddition {

int[][] a=new int[3][3];

int[][] b=new int[3][3];

int[][] c=new int[3][3];

int i,j;

void get()

{

Scanner sc=new Scanner(System.in);

System.out.println("the matrix1");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

a[i][j]=sc.nextInt();

}

}

System.out.println("the Matrix 2");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

b[i][j]=sc.nextInt();

}

}

}

void add()

{

System.out.println("The array addition is:");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

c[i][j]=a[i][j]+b[i][j];

System.out.print(" "+c[i][j]);

}

System.out.println();

}

}

public static void main(String[] args) {

MatrixAddition ma=new MatrixAddition();

ma.get();

ma.add();

}

}

Output:

the matrix1

1

2

3

4

5

6

7

8

9

the Matrix 2

1

2

3

3

4

5

6

78

4

The array addition is:

2 4 6

7 9 11

13 86 13

11. Write a Java Program to do product of 2 matrices of 3 rows and 3 columns.

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package matrixmultiplication;

import java.util.\*;

public class MatrixMultiplication {

int[][] a=new int[3][3];

int[][] b=new int[3][3];

int[][] c=new int[3][3];

int i,j,k;

void get()

{

Scanner sc=new Scanner(System.in);

System.out.println("the matrix1");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

a[i][j]=sc.nextInt();

}

}

System.out.println("the Matrix 2");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

b[i][j]=sc.nextInt();

}

}

}

void multi()

{

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

for(k=0;k<3;k++)

{

c[i][k]+=(a[i][k]\*b[k][j]);

}

}

}

}

void display()

{

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

System.out.print(" "+c[i][j]);

}

System.out.println();

}

}

public static void main(String[] args) {

MatrixMultiplication mm=new MatrixMultiplication();

mm.get();

mm.multi();

mm.display();

}

}

Output:

the matrix1

1

2

3

4

5

6

7

8

9

the Matrix 2

8

7

5

3

6

8

3

2

67

The result matrix:

20 34 216

80 85 432

140 136 648