Lab1

1:write program to test Hello World.

public class Hello {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("hello...!!!");

}

}

output: hello...!!!

-------------------------------------------------------------------------------------------------------------

2:Write a program to adddition of two numbers .

import java.util.Scanner;

public class Add {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc=new Scanner(System.in);

System.out.println("ENTER THE FIRST NUM:");

int a = sc.nextInt();

System.out.println("ENTER THE second NUM:");

int b = sc.nextInt();

int c=a+b;

System.out.println("Addition=" +c);

}

}

output: ENTER THE FIRST NUM:

23

ENTER THE second NUM:

34

Addition=57

-----------------------------------------------------------------------------------------------------------------

3:Write a program to swap two numbers.

import java.util.Scanner;

public class Swap {

public static void main(String[] args) {

int a,b,t;

System.out.println("enter the value of a & b");

Scanner sc= new Scanner(System.in);

a=sc.nextInt();

b=sc.nextInt();

System.out.println("before swapping a:" +a);

System.out.println("before swapping b:" +b);

t=a;

a=b;

b=t;

System.out.println("after swapping a :" +a);

System.out.println("after swapping b :" +b);

}

}

output: enter the value of a & b

10

20

before swapping a:10

before swapping b:20

after swapping a :20

after swapping b :10

------------------------------------------------------------------------------------------------------------------

4. Write a program to accept an integer and check if it is even or odd.

import java.util.Scanner;

public class EvenOdd {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter any number:");

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

if(a % 2==0)

{

System.out.println("number is even");

}

else {

System.out.println("number is odd");

}

}

}

output: Enter any number:

23

number is odd

Enter any number:

10

number is even

-----------------------------------------------------------------------------------------------------------------

5. Write a program to accept a number and check if it is divisible by 5 and 7.

import java.util.Scanner;

public class Divisible {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter any number:");

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

if(a%5==0 && a%7==0)

System.out.println("Number is divisible by 5 & 7");

else

System.out.println("Number is not divisible by 5 & 7");

}

}

output: Enter any number:

35

Number is divisible by 5 & 7

-----------------------------------------------------------------------------------------------------------------------

6. Write a program, which accepts annual basic salary of an employee and calculates and displays the

Income tax as per the following rules.

Basic: < 1, 50,000 Tax = 0

1, 50,000 to 3,00,000 Tax = 20%

> 3,00,000 Tax = 30%

import java.util.Scanner;

public class Salary {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter Basic\_Salary of an emp");

double tax=0,sal;

Scanner sc=new Scanner(System.in);

sal=sc.nextDouble();

if(sal<=150000)

System.out.println("tax=" +tax);

else if(sal>=150000&& sal<=300000)

{

tax=(sal\*0.2);

System.out.println("tax=" +tax);

}

else if(sal>300000)

{

tax=(sal\*0.3);

System.out.println("tax=" +tax);

}

}

}

output:Enter Basic\_Salary of an emp

175000

tax=35000.0

-------------------------------------------------------------------------------------------------------------------------

7. Accept a lowercase character from the user and check whether the character is a vowel or consonant.

(Hint: a, e, i, o, u are vowels)

import java.util.Scanner;

public class Vowel {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter any lowercase character:");

Scanner sc= new Scanner(System.in);

char ch;

ch= sc.next().charAt(0);

if(ch=='a'|| ch=='e'|| ch=='i'|| ch=='o' || ch=='u')

System.out.println("character is vowel");

else

System.out.println("character is consonant");

}

}

output:Enter any lowercase character:

a

character is vowel

----------------------------------------------------------------------------------------------------------------------------

8. Write a C program to input angles of a triangle and check whether triangle is valid or not.

import java.util.Scanner;

public class Triangle {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter angles of an triangle");

Scanner sc= new Scanner(System.in);

int a,b,c;

a=sc.nextInt();

b=sc.nextInt();

c=sc.nextInt();

if(a+b+c==180)

{

System.out.println(" triangle is valid");

}

else {

System.out.println("triangle is not valid");

}

}

}

output: Enter angles of an triangle

30

60

90

triangle is valid

-------------------------------------------------------------------------------------------------------------------------------

9:Write a program to find factorial of a given number. ex:no5 fact=5\*4\*3\*2\*1=120

import java.util.Scanner;

public class factorial {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter any number:");

int a,i,fact=1;

Scanner sc= new Scanner(System.in);

a=sc.nextInt();

for(i=1;i<=a;i++)

{

fact=fact\*i;

}

System.out.println("factorial of num:" + fact);

}

}

output: Enter any number:

6

factorial of num:720

-----------------------------------------------------------------------------------------------------------------------------------

10:Write a program to find m to the power n. m=3 and n=4 so 3\*3\*3\*3

import java.util.Scanner;

import java.util.Scanner;

//Write a program to find m to the power n. m=3 and n=4 so 3\*3\*3\*3

public class Power {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter any number:");

Scanner sc= new Scanner(System.in);

int num, pow=1, i;

num=sc.nextInt();

System.out.println("Enter power:");

int index=sc.nextInt();

for(i=0;i<=index-1;i++)

pow=num\*pow;

System.out.println("power of number is:" +pow);

}

}

output:Enter any number:

2

Enter power:

3

power of number is:8

----------------------------------------------------------------------------------------------------------------------------------------

11:Check if number is a prime number or not.:

**import** java.util.Scanner;

**public** **class** Prime {

**public** **static** **void** main(String[] args){

// **TODO** Auto-generated method stub

Scanner sc= **new** Scanner(System.***in***);

**int** i,m=0,flag=0;

System.***out***.println("enter any num");

**int** n=sc.nextInt();//it is the number to be checked

m=n/2;

**if**(n==0||n==1){

System.***out***.println(n+" is not prime number");

}**else**{

**for**(i=2;i<=m;i++){

**if**(n%i==0){

System.***out***.println(n+" is not prime number");

flag=1;

**break**;

}

}

**if**(flag==0) { System.***out***.println(n+" is prime number"); }

}//end of else

}

}

}

output: enter any num

4

4 is not prime number

--------------------------------------------------------------------------------------------------------------------------------

12:Sum of series : 1+2+3+….+n

import java.util.Scanner;

public class SumNum {

public static void main(String[] args) {

// TODO Auto-generated method stub

int i,sum=0;

System.out.println("enter the limit:");

Scanner sc=new Scanner(System.in);

int num=sc.nextInt();

for(i=1;i<=num;++i)

{

sum =sum +i ;

}

System.out.println("sum of first n numbers" +sum);

}

}

output: enter the limit:

10

sum of first n numbers 55

-----------------------------------------------------------------------------------------------------------------------------------------

13. Check whether the number is palindrome or not?

import java.util.Scanner;

public class Palindrome {

public static void main(String[] args) {

// TODO Auto-generated method stub

int r,sum=0,temp,n;

System.out.println("enter any number:");

Scanner sc=new Scanner(System.in);

n =sc.nextInt();

temp=n;

while(n>0)

{

r=n%10;

sum=(sum\*10)+r;

n=n/10;

}

if(temp==sum)

System.out.println("number is Palindrome");

else

System.out.println("number is not Palindrome");

}

}

output: enter any number:

111

number is Palindrome

----------------------------------------------------------------------------------------------------------------------------------------------

14:Write a program to find sum of all even and odd numbers between 1 to n.

import java.util.Scanner;

public class SumEvenodd {

public static void main(String[] args) {

// TODO Auto-generated method stub

int n,sumE=0,sumO=0;

Scanner sc=new Scanner(System.in);

System.out.println("enter the no of elements in array:");

n=sc.nextInt();

int a[]=new int[n];

System.out.println("enter the elements of array:");

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

{

a[i]=sc.nextInt();

}

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

{

if (a[i]%2==0)

{

sumE=sumE+a[i];

}

else

sumO=sumO+a[i];

}

System.out.println("the sum of even num is:"+sumE);

System.out.println("the sum of odd num is:"+sumO);

}

}

output:enter the no of elements in array:

4

enter the elements of array:

12

2

3

4

the sum of even num is:18

the sum of odd num is:3

---------------------------------------------------------------------------------------------------------------------------------------

15: Write a program to enter a number and print its reverse.

import java.util.Scanner;

public class ReverseNo {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("enter any number to reverse");

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int reverse=0,r;

while(n!=0)

{

r=n%10;

reverse=(reverse\*10)+r;

n=n/10;

}

System.out.println("reverse of the given num is=" +reverse);

}

}

output: enter any number to reverse

123

reverse of the given num is=321

-----------------------------------------------------------------------------------------------------------------------------------------

16:Write a program to print all Prime numbers between 1 to n.

import java.util.Scanner;

public class PrimeN {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("enter the limit");

Scanner sc=new Scanner(System.in);

int num=sc.nextInt();

int i,j, count;

for(i=2;i<=num;i++) {

count=0;

for(j=1;j<=i;j++)

{

if(i%j==0)

count++;

}

if(count==2)

System.out.println(i+"");

}

}

}

output:enter the limit

50

2

3

5

7

11

13

7

19

23

29

31

37

41

43

47

----------------------------------------------------------------------------------------------------------------------------------------

17:Write a program to check entered number is Armstrong number or not.

import java.util.Scanner;

public class Armstrong {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("enter any number to check if it is armstrong or not");

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int sum=0,r;

while(n!=0)

{

r=n%10;

sum=sum+r\*r\*r;

n=n/10;

}

System.out.println("sum=" +sum);

if(n==sum)

System.out.println("Num is not Armstrong");

else

System.out.println("Num is Armstrong");

}

}

output: enter any number to check if it is armstrong or not

153

sum=153

Num is Armstrong

--------------------------------------------------------------------------------------------------------------------------------------------------

18:Write a program to find greatest of three numbers using nested if-else.

import java.util.Scanner;

//18:Write a program to find greatest of three numbers using nested if-else.import java.util.Scanner;

public class GreaterNo {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("enter any three no:");

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

int b=sc.nextInt();

int c=sc.nextInt();

if(a>b && a>c)

{

System.out.println(" no a is greatest" + a);

}

else if(b>a && b>c)

{

System.out.println(" no b is greatest" + b);

}

else if(c>a && c>b)

{

System.out.println(" no c is greatest" + c);

}

}

}

output: enter any three no:

20

30

45

no c is greatest45

-----------------------------------------------------------------------------------------------------------------------------------------------------

19:Create menu driven program for Pizza Shop.And display total amount.

import java.util.Scanner;

public class Pizza {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc = new Scanner(System.in);

System.out.println("1:Plain Pizza(100) 2:Cheese Pizza(150) 3:French Fries(50) 4:Sandwich(70) 5:Exit");

int total=0,c,qty = 0;

do

{

System.out.println("Enter Choice");

c = sc.nextInt();

switch (c) {

case 1:

System.out.println("Enter Plain Pizza Qty");

qty = sc.nextInt();

total=total+qty\*100;

break;

case 2:

System.out.println("Enter Cheese Pizza Qty");

qty = sc.nextInt();

total+=qty\*150;

break;

case 3:

System.out.println("Enter French Fries Qty");

qty = sc.nextInt();

total+=qty\*50;

break;

case 4:

System.out.println("Enter Sandwich Qty");

qty = sc.nextInt();

total+=qty\*70;

break;

case 5:

//calculate amount

System.out.println("Total Amount="+total);

break;

default:

System.out.println("Invalid");

break;

}

}while(c!=5);

System.out.println("------Thank You-------");

}

}

output:1:Plain Pizza(100) 2:Cheese Pizza(150) 3:French Fries(50) 4:Sandwich(70) 5:Exit

Enter Choice

2

Enter Cheese Pizza Qty

4

Enter Choice

5

Total Amount=600

------Thank You-------

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20:Accept a single digit from the user and display it in words. For example, if digit entered is 9, display Nine.

import java.util.Scanner;

public class Num\_Word {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc=new Scanner(System.in);

System.out.println( "1. 2. 3. 4. 5. 6. 7. 8. 9.");

System.out.println("Enter your Choice:" );

int ch=sc.nextInt();

switch(ch)

{

case 1:

System.out.println("One");

break;

case 2:

System.out.println("Two");

break;

case 3:

System.out.println("Three");

break;

case 4:

System.out.println("Four");

break;

case 5:

System.out.println("Five");

break;

case 6:

System.out.println("Six");

break;

case 7:

System.out.println("Seven");

break;

case 8:

System.out.println("Eight");

break;

case 9:

System.out.println("Nine");

break;

default:

System.out.println("Invalid");

break;

}

}

}

output:1. 2. 3. 4. 5. 6. 7. 8. 9.

Enter your Choice:

8

Eight

----------------------------------------------------------------------------------------------------------------------------------------------------

21. Write a program, which accepts two integers and an operator as a character (+ - \* / ), performs the

corresponding operation and displays the result.

import java.lang.Math;

import java.util.Scanner;

public class Switch\_mathOPerations {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("enter any two number: ");

Scanner sc=new Scanner(System.in);

int res,ch;

int a=sc.nextInt();

int b=sc.nextInt();

System.out.println("Enter your Choice:" );

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

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

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

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

ch=sc.nextInt();

switch(ch) {

case 1:

res=a+b;

System.out.println("Addition of two number is : "+res);

break;

case 2:

res=a-b;

System.out.println(" substraction of two number is : "+res);

break;

case 3:

res=a\*b;

System.out.println("Multiplication of two number is : "+res);

break;

case 4:

res=a/b;

System.out.println("Division of two number is : "+res);

break;

default:System.out.println("operation is not possible ..");

}

}

}

output:enter any two number:

20

30

Enter your Choice:

1.addition

2.substraction

3.Multiplication

4.Division

3

Multiplication of two number is : 600

-----------------------------------------------------------------------------------------------------------------------------------------------------

Lab 3

1:Java program to print the following pattern on the console

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

public class Pattern {

public static void main(String[] args) {

// TODO Auto-generated method stub

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

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

{

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

System.out.print(" ");

}

System.out.println(" ");

}

}

}

output: \*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

------------------------------------------------------------------------------------------------------------------------------------------------

2:Write a program which will accept student information like rollno,name,5 subject marks.calculate total and percentage.calculate grade..

per >75 grade :A

per<74 and >60 :B

per<59 :C

import java.util.Scanner;

public class Student {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc= new Scanner(System.in);

System.out.println("Enter Roll num:");

int rol=sc.nextInt();

System.out.println("Enter Name:");

char name=sc.next().charAt(0);

//System.out.println("enter the marks1:");

int a[]=new int[5];

System.out.println("enter the marks of 5 subjects :");

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

{

a[i]=sc.nextInt();

}

int total=0,per=0;

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

{

total=total+a[i];

per=total/5;

}

System.out.println("Total=" + total);

System.out.println("Percentage=" + per);

//Grading

if (per>75)

System.out.println("Grade A");

else if(per<74 && per>60)

System.out.println("Grade B");

else if (per<59)

System.out.println("Grade c");

}

}

output:Enter Roll num:

2

Enter Name:

Ashwini

enter the marks of 5 subjects :

99

98

97

96

89

Total=479

Percentage=95

Grade A

-------------------------------------------------------------------------------------------------------------------------------------

3:Write a Java program to find the maximum and minimum value of an array.

import java.util.Scanner;

public class ArrMaxMin {

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("enter array size:");

Scanner sc=new Scanner(System.in);

int size=sc.nextInt();

System.out.println("enter elements of array:");

int a[]=new int[size];

int i=0;

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

{

a[i]=sc.nextInt();

}

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

{

if (a[0] > a[i])

{

a[0] = a[i];

}

}

System.out.println("Smallest =" +a[0]);

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

{

if (a[0] < a[i])

{

a[0] = a[i];

}

}

System.out.println("Largest =" +a[0]);

}

}

output: enter array size:

5

enter elements of array:

7

2

5

1

3

Smallest =1

Largest =5

---------------------------------------------------------------------------------------------------------------------------------------------------

4:Write a menu driven program for stationary shop.Items are 1:Pen 2:Pencil 3:NoteBook 4:Bottle 5:ColorBox.

1 pen cost is 10Rs,Pencil is 5 rs.NoteBook is 20 rs Bottle is 30 rs and ColorBox is at 50 Rs.

Calculate Total of all purchesed items.

import java.util.Scanner;

public class MenuStationary {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc = new Scanner(System.in);

System.out.println("1:Pen(10) 2:Pencil(5) 3:NoteBook(20) 4:Bottle(30) 5:ColorBox(50) 6:Exit");

int total=0,c,qty = 0;

do

{

System.out.println("Enter Choice");

c = sc.nextInt();

switch (c) {

case 1:

System.out.println("Enter Pen Qty");

qty = sc.nextInt();

total=total+qty\*10;

break;

case 2:

System.out.println("Enter Pencil Qty");

qty = sc.nextInt();

total+=qty\*5;

break;

case 3:

System.out.println("Enter Note Book Qty");

qty = sc.nextInt();

total+=qty\*20;

break;

case 4:

System.out.println("Enter Bottle Qty");

qty = sc.nextInt();

total+=qty\*30;

break;

case 5:

System.out.println("Enter ColorBox Qty");

qty = sc.nextInt();

total+=qty\*50;

break;

case 6:

//calculate amount

System.out.println("Total Amount="+total);

break;

default:

System.out.println("Invalid");

break;

}

}while(c!=6);

System.out.println("------Thank You-------");

}

}

output: 1:Pen(10) 2:Pencil(5) 3:NoteBook(20) 4:Bottle(30) 5:ColorBox(50) 6:Exit

Enter Choice

1

Enter Pen Qty

20

Enter Choice

2

Enter Pencil Qty

5

Enter Choice

6

Total Amount=225

------Thank You-------

----------------------------------------------------------------------------------------------------------------------------------------

5:Write a Java program to accept 2D aaray elements.Display all elements.

import java.util.Scanner;

public class Array2d {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner sc=new Scanner(System.in);

//take values of row &coloum

System.out.println("enter num of rows:");

int a=sc.nextInt();

System.out.println("enter num of coloums:");

int b=sc.nextInt();

int i=0,j=0;

int[][] arr= new int[a][b];

//take elements

System.out.println("enter elements of array:");

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

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

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

//display

System.out.println("entered elements of array:");

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

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

System.out.println(arr[i][j]);

System.out.println();

}

}

output: enter num of rows:

3

enter num of coloums:

3

enter elements of array:

1

2

3

4

5

6

7

8

9

entered elements of array:

1

2

3

4

5

6

7

8

9

--------------------------------------------------------------------------------------------------------------------------------------------------------------

6:Write a java program to make the addition of two 2D array And store result in Third array.

import java.util.Scanner;

public class Add2Array {

public static void main(String args[]){

int a[][]={{1,2,3},{3,4,5},{5,6,7}};

int b[][]={{1,2,3},{3,4,5},{5,6,7}};

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

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

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

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

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

}

System.out.println();

}

}

}

output: 2 4 6

6 8 10

10 12 14

--------------------------------------------------------------------------------------------------------------------

7:Write a java program to convert char array into String.

import java.util.Scanner;

public class char\_string {

public static void main(String[] args) {

// TODO Auto-generated method stub

char[] ch={'W','e','l','c','o','m','e' ,'T','o' , 'I','A','C','S','D'};

String str=new String(ch);

System.out.println(str);

}

}

output: WelcomeToIACSD

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8:Write a program to accept array of string.Display all elements in uppercase.

import java.util.Scanner;

public class str\_disp {

public static void main(String [] args) {

String str ="welcome to iacsd ";

String upper\_str = str.toUpperCase();

System.out.println("Original String: " + str);

System.out.println("String in uppercase: " + upper\_str);

}

}

output: Original String: welcome to iacsd

String in uppercase: WELCOME TO IACSD

------------------------------------------------------------------------------------------------------------------------------------------------------------

9:Create Menu driven program for array operations.1:Read Array 2:Print Array 3:Search element in array 4:Reverse Array 5:Even number from array6:sum of array element

import java.util.Scanner;

public class array\_operations{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int c;

int[]arr= new int[5];

System.out.println("Menu:1.read array 2:Print Array 3:Search element in array");

System.out.println(" 4:Reverse Array 5:Even number from array6:sum of array element");

do

{

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

c=sc.nextInt();

switch(c)

{

case 1:

System.out.println("enter the 5 elements of array");

for(int i=0;i<arr.length;i++)

{

arr[i]=sc.nextInt();

System.out.println("array elements stored");

}

break;

case 2:System.out.println("display array");

for(int element:arr)

{

System.out.print(element +" ");

}

break;

case 3:

System.out.println("enter the element for searching");

int key =sc.nextInt();

for(int element:arr) {

if(element==key) {

System.out.println("element is present"+element);

break;

}

}

case 4:System.out.println("display array in reverse order");

for(int i=arr.length-1;i>=0;i--)

{

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

}

break;

case 5:System.out.println("the even element in array are:");

for(int element:arr) {

if(element%2==0) {

System.out.println(""+element);

break;

}

}

case 6:System.out.println("the sum of array element are:");

int sum=0;

for(int element:arr) {

sum=sum + element;

}

System.out.println(sum);

break;

case 7:System.out.println("exit");

break;

default:System.out.println("Invalid");

break;

}

}while(c!=7);

}

}

output :Menu:1.read array 2:Print Array 3:Search element in array

4:Reverse Array 5:Even number from array6:sum of array element

enter your choice

1

enter the 5 elements of array

1

array elements stored

2

array elements stored

3

array elements stored

4

array elements stored

5

array elements stored

enter your choice

2

display array

1 2 3 4 5 enter your choice

3

enter the element for searching

2

element is present2

display array in reverse order

5 4 3 2 1 enter your choice

5

the even element in array are:

2

the sum of array element are:

15

enter your choice

6

the sum of array element are:

15

enter your choice

enter your choice

7

exit

-------------------------------------------------------------------------------------------------------------------------------------------------------------------

10:read two int array...and store both in third array and display third array

arr1:----->1 2 3

arr2:----->5 6 7 8 9

result----->1 2 3 5 6 7 8 9

public class Concat\_array {

public static void main(String[] args) {

int[] arr1= {1,2,3};

int[] arr2= {5,6,7,8,9};

int[] arr3= new int [8];

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

arr3[i]=arr1[i];

}

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

arr3[i+3]=arr2[i];

}

System.out.println("3rd Array is");

for(int i=0;i<8;i++)

{

System.out.print(arr3[i]+"");

}

}

}

output: 3rd Array is:

1 2 3 5 6 7 8 9

------------------------------------------------------------------------------------------------------------------------------------------

11:Create application for method overloading

class Adder{

static int add(int a,int b) {return a+b;}

static int add(int a,int b, int c){return a+b+c;}

}

public class testAdder {

public static void main(String[] args) {

System.out.println("method overloading");

System.out.println(adder.add(1,1));

System.out.println(" ");

System.out.println(adder.add(1,1,1));

}

}

output:method overloading

2

3

-------------------------------------------------------------------------------------------

LAB 4

DAY 7 (Lab1)

1:Write a program to create student class with data members rollno, marks1,mark2,mark3.

Accept data (acceptInfo()) and display using display member function.

Also display total,percentage and grade.

package bookdetails;

import java.util.Scanner;

public class student {

private int roll\_no;

private int marks1;

private int marks2;

private int marks3;

public student() { //Default constructor

roll\_no=1;

marks1=40;

marks2=40;

marks3=40;

}

public student(int roll\_no, int marks1, int marks2, int marks3) { //parameterized constructor

this.roll\_no=roll\_no;

this.marks1=marks1;

this.marks2=marks2;

this.marks3=marks3;

}

public void setroll\_no(int roll\_no) //setter

{

this.roll\_no=roll\_no;

}

public void setmarks1(int marks1)

{

this.marks1=marks1;

}

public void setmarks2(int marks2)

{

this.marks2=marks2;

}

public void setmarks3(int marks3)

{

this.marks3=marks3;

}

public int getroll\_no() //getter

{

return roll\_no;

}

public int getmarks1()

{

return marks1;

}

public int getmarks2()

{

return marks2;

}

public int getmarks3()

{

return marks3;

}

public void display()

{

System.out.println( "the Student details are:"+roll\_no+" "+marks1+" "+marks2+" "+marks3+" ");

}

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

student s=new student();

System.out.println("-------Student Details----- ");

System.out.println("enter student roll\_no, marks1,marks2,marks3:");

s.setroll\_no(s.roll\_no=sc.nextInt());

s.setmarks1(s.marks1=sc.nextInt());

s.setmarks2(s.marks2=sc.nextInt());

s.setmarks3(s.marks3=sc.nextInt());

s.getroll\_no();

s.getmarks1();

s.getmarks2();

s.getmarks3();

s.display();

}

}

output:-------Student Details-----

enter student roll\_no, marks1,marks2,marks3:

1

99

98

97

the Student details are:1 99 98 97

-----------------------------------------------------------------------------------------------------------------------------------------

2. Create a class Person with data members as name, age, city. Write getters and setters for all the data

members. Also add the display function. Create Default and Parameterized constructors. Create the

object of this class in main method and invoke all the methods in that class.

package bookdetails;

import java.util.Scanner;

public class Person {

private String name, city;

private int age;

public Person() { //default

name="Komal";

city="Pune";

age=25;

}

public Person(String name,String city, int age) { //paramerterized

this.name=name;

this.city=city;

this.age=age;

}

public void setname(String name)

{

this.name=name;

}

public void setcity(String city)

{

this.city=city;

}

public void setage(int age)

{

this.age=age;

}

public String getname() //getter

{

return name;

}

public String getcity()

{

return city;

}

public int getage()

{

return age;

}

public void display()

{

System.out.println("Person Details:" +name+" "+city+" "+age);

}

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter person Details:name,city,age:");

Scanner sc=new Scanner(System.in);

Person p = new Person();

p.setname(p.name=sc.next());

p.setcity(p.city=sc.next());

p.setage(p.age=sc.nextInt());

p.getname();

p.getcity();

p.getage();

p.display();

}

}

output:Enter person Details:name,city,age:

Ashwini A.nagar 26

Person Details:Ashwini A.nagar 26

--------------------------------------------------------------------------------------------------------------------------------------------------------------

3. Create a class Date with data members as dd, mm, yy. Write getters and setters for all the data members. Also add the display function. Create Default and Parameterized constructors. Create the

object of this class in main method and invoke all the methods in that class.

package datetest;

import java.util.Scanner;

public class Date {

private int dd,mm,yy;

public Date() { //Default constructor

dd=24;

mm=8;

yy=1998;

}

public Date(int d, int m, int y) { //parameterized constructor

dd=d;

mm=m;

yy=y;

}

public void setDay(int day) //setter

{

dd=day;

}

public void setMonth(int month)

{

mm=month;

}

public void setYear(int year)

{

yy=year;

}

public int getDay() { //getter

return dd;

}

public int getMonth()

{

return mm;

}

public int getYear()

{

return yy;

}

public void display() {

System.out.print(" "+dd); //display

System.out.print("/"+mm);

System.out.print("/"+yy);

}

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

Date D =new Date(); //object

System.out.println("Enter Day Month Year");

D.setDay(D.dd=sc.nextInt()); //input

D.setMonth(D.mm=sc.nextInt());

D.setYear(D.yy=sc.nextInt());

D.getDay(); //return

D.getMonth();

D.getYear();

D.display(); //output

}

}

output:Enter Day Month Year

22

9

2022

22/9/2022

----------------------------------------------------------------------------------------------------------------------

4. Create a class Book with data members as bname,id,author,price. Write getters and setters for all the

data members. Also add the display function. Create Default and Parameterized constructors. Create

the object of this class in main method and invoke all the methods in that class.

package bookdetails;

import java.util.Scanner;

import datetest.Date;

public class Book {

public String bname,author;

private int id,price;

public Book() { //Default constructor

bname="ABC";

author="XYZ";

id=1001;

price=100;

}

public Book(String bname, String author, int id , int price) { //parameterized constructor

this.bname=bname;

this.author=author;

this.id=id;

this.price=price;

}

public void setbname(String bname) //setter

{

this.bname=bname;

}

public void setauthor(String author)

{

this.author=author;

}

public void setid(int id)

{

this.id=id;

}

public void setprice(int price)

{

this.price=price;

}

public String getbname() { //getter

return bname;

}

public String getauthor()

{

return author;

}

public int getid()

{

return id;

}

public int getprice()

{

return price;

}

//display

public void display() {

System.out.print(bname+" "+author+" "+id+" "+price); //display

}

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

Book b =new Book(); //object

System.out.println("Enter Book name, Author, id, price");

b.setbname(b.bname=sc.next()); //input

b.setauthor(b.author=sc.next());

b.setid(b.id=sc.nextInt());

b.setprice(b.price=sc.nextInt()); //return

b.getbname();

b.getauthor();

b.getid();

b.getprice();

b.display(); //output

}

}

output:Enter Book name, Author, id, price

FIRE ABC 420 100

FIRE ABC 420 100

------------------------------------------------------------------------------------------------------------------------------------

5. Create a class Point with data members as x,y. Create Default and Parameterized constructors. Write

getters and setters for all the data members. Also add the display function. Create the object of this

class in main method and invoke all the methods in that class.

package bookdetails;

import java.util.Scanner;

public class Point{

private int x; int y;

public Point() { //Default constructor

int x=1;

int y=2;

}

public Point(int x, int y) { //parameterized constructor

this.x=x;

this.y=y;

}

public void setx(int y) //setter

{

this.x=x;

}

public void sety(int y)

{

this.y=y;

}

public int getx() //getter

{

return x;

}

public int gety()

{

return y;

}

public void display()

{

System.out.println("the values of x & y are: " +x+" "+y);

}

public void add()

{

System.out.println("the values of x & y are: " +(x+y));

}

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("-----Point------ ");

System.out.println("enter values of x & y ");

Scanner sc=new Scanner(System.in);

Point p = new Point();

p.setx(p.x=sc.nextInt());

p.sety(p.y=sc.nextInt());

p.getx();

p.gety();

p.display();

p.add();

}

}

output:-----Point------

enter values of x & y

20 30

the values of x & y are: 20 30

the values of x & y are: 50

-------------------------------------------------------------------------------------------------------------------------

6. Create a class ComplexNumber with data members real, imaginary. Create Default and Parameterized constructors. Write getters and setters for all the data members. Also add the display function. Create the object of this class in main method and invoke all the methods in that class.

package bookdetails;

import java.util.Scanner;

public class ComplexNum {

double real;

double imag;

public ComplexNum( ){

real =76.8;

imag = 24.0;

}

public ComplexNum(double real, double imag)

{

this.real =real;

this.imag = imag;

}

public void setreal(double real)

{

this.real=real;

}

public void setimag( double imag)

{

this.imag = imag;

}

public double getreal()

{

return real;

}

public double geimag()

{

return imag;

}

public void display()

{

System.out.println("-------Complex num------");

System.out.println("Complex num is:" +real+ " "+imag+" ");

}

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

System.out.println("-------Complex num------");

System.out.println("Complex num is: my\_real & my\_imag");

ComplexNum c=new ComplexNum();

c.setreal(c.real=sc.nextDouble());

c.setimag(c.imag=sc.nextDouble());

c.getreal();

c.geimag();

c.display();

}

}

output:-------Complex num------

Complex num is: my\_real & my\_imag

24.11 27

-------Complex num------

Complex num is:24.11 27.0

----------------------------------------------------------------------------------------------------------------------------------------

7:Create array of BankAccount class and store 5 objects....create menu driven application for same.....ex. show all account names ,balance,email...

package com;

public class Account {

//private int acctId;

private int acctId;

private static String bankName;//to set default and save memory

private String name;

private String email;

private String address;

private double balance;

private static int idGenerate;// the account id will be increased by one for new customer

private static int count;

static { //default for class(static block)

idGenerate = 10001;

bankName = "Kota Bank";

count = 0;

}

public Account() { // default constructor for object

count++;

idGenerate++;

}

public Account( String name, String email, String address, double balance) {//parameterized constructor

this.acctId = idGenerate;

this.name = name;

this.email = email;

this.address = address;

this.balance = balance;

count++;

idGenerate++;

System.out.println("Account created successfully");

}

public void setName(String name) {

this.name = name;

//System.out.println("Name changed successfully");

}

public void setBalance(int balance) {

this.balance = balance;

}

public void setEmail(String email) {

this.email = email;

}

public void setAddress(String address) {

this.address = address;

}

public int getAcctId() {

return this.acctId;

}

public String getName() {

return name;

}

public String getEmail() {

return this.email;

}

public String getAddress() {

return this.address;

}

public void deposit(int amount) {//function define

balance = balance + amount;

System.out.println("Amount deposited.");

}

public void withdraw(int amount) {

balance = balance - amount;

}

public void showBalance() {

System.out.println("Current Balance: "+balance);

}

public void moneyTransfer(int amount, Account receiver) {

this.balance = this.balance - amount;

receiver.balance = receiver.balance+amount;

System.out.println("Money Transferred from "+this.name+" to "+receiver.name+".");

}

public void getDetails() {

System.out.println();

System.out.println("Name: "+name);

System.out.println("Email: "+email);

System.out.println("Address: "+address);

System.out.println("Bank name: "+bankName);

System.out.println("Account Id: "+acctId);

System.out.println("Balance: "+balance);

System.out.println();

}

}

-----------------------------

TestAccount.java

package Implement;

import com.Account;

import java.util.Scanner;

public class TestAccount {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int choice = 0, index = 0;// choice for user //for another user increament

Account kota[] = new Account[10]; //object

do {

System.out.println("\n1. Add Account\n2. Deposite\n3. Withdraw\n4. Show Balance \n5. Update details \n6. Get details \n7. Transfer \n0. Exit ");

choice = sc.nextInt();

switch(choice) {

case 1:// Create Account

if(index<kota.length) {

System.out.println("Enter your details here: ");

System.out.println("Name : \nEmail : \nAddress : \nBalance :");

Account obj = new Account(sc.next(), sc.next(), sc.next(), sc.nextInt());//obj

kota[index] = obj;

kota[index].getDetails();

index++;

}

else

System.out.println("No space");

break;

case 2:

System.out.println("Enter Account no: ");

int id = sc.nextInt();

boolean flag = true;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id) {

System.out.println("Enter amount to deposit: ");

kota[i].deposit(sc.nextInt());//store

kota[i].showBalance();//display

flag = false;

}

}

if(flag)

System.out.println("Invalid Account Number");

break;

case 3:

System.out.println("Enter Account no: ");

id = sc.nextInt();

flag = true;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id) {

System.out.println("Enter amount to withdraw: ");

kota[i].withdraw(sc.nextInt());

kota[i].showBalance();

flag = false;

}

}

if(flag)

System.out.println("Invalid Account Number");

break;

case 4:

System.out.println("Enter Account no: ");

id = sc.nextInt();

flag = true;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id) {

kota[i].showBalance();

}

}

if(flag)

System.out.println("Invalid Account Number");

break;

case 5:

System.out.println("What details you want to change: ");

System.out.println("1. Name \n2. Email \n3. Address: ");

int select = sc.nextInt();

switch(select) {

case 1: System.out.println("Enter Account no: ");

id = sc.nextInt();

flag = true;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id) {

System.out.print("Enter new Name:");

kota[i].setName(sc.next());

kota[i].getDetails();

flag = false;

}

}

if(flag)

System.out.println("Invalid Account Number");

break;

case 2:

System.out.println("Enter Account no: ");

id = sc.nextInt();

flag = true;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id) {

System.out.print("Enter new Email:");

kota[i].setEmail(sc.next());

kota[i].getDetails();

}

}

if(flag)

System.out.println("Invalid Account Number");

break;

case 3:

System.out.println("Enter Account no: ");

id = sc.nextInt();

flag = true;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id) {

System.out.print("Enter new Address:");

kota[i].setAddress(sc.next());

kota[i].getDetails();

flag = false;

}

}

if(flag)

System.out.println("Invalid Account Number");

break;

}

break;

case 6:

System.out.println("Enter Account no: ");

id = sc.nextInt();

flag = true;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id) {

kota[i].getDetails();

flag = false;

}

}

if(flag)

System.out.println("Invalid Account Number");

break;

case 7:

System.out.println("Enter Sender account no: ");

id = sc.nextInt();

System.out.println("Enter Receiver account no: ");

int id1 = sc.nextInt();

//int n=0;

for(int i=0; i<index; i++) {

if(kota[i].getAcctId() == id ) {

for(int j=0; j<index; j++) {

if(kota[j].getAcctId() == id1 ) {

System.out.println("Enter amount to send: ");

int amount = sc.nextInt();

kota[i].moneyTransfer(amount, kota[j]);

kota[i].getDetails();

break;

}

}

}

}

break;

case 0: System.out.println("Exited");

break;

default :

System.out.println("Invalid");

}

}while(choice != 0);

}

}

output:

-----------------------------------------------------------------------------------------------------------------------------------------------------------------------

DAY 7 (Lab1)

1:Create Date class with members day,month ,year.

Write no argument and parameterised constructor .Create two object s and initialize them using no argument and parameterised constructor

respectively.Print date using display function.

package demo;

import java.util.Scanner;

public class Date {

public int dd;

public int mm;

public int yy;

public Date() { //Default constructor

dd=24;

mm=8;

yy=1998;

}

public Date(int d, int m, int y) { //parameterized constructor

dd=d;

mm=m;

yy=y;

}

public void setDay(int day) //setter

{

dd=day;

}

public void setMonth(int month)

{

mm=month;

}

public void setYear(int year)

{

yy=year;

}

public int getDay() { //getter

return dd;

}

public int getMonth()

{

return mm;

}

public int getYear()

{

return yy;

}

public void display() {

System.out.print(" "+dd); //display

System.out.print("/"+mm);

System.out.print("/"+yy);

}

}

package demo;

import java.util.Scanner;

import demo.Date;

public class testdate {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

Date D =new Date();

Date D1 =new Date(); //object

System.out.println("Enter Day Month Year");

D.setDay(D.dd=sc.nextInt()); //input

D.setMonth(D.mm=sc.nextInt());

D.setYear(D.yy=sc.nextInt());

D.getDay(); //return

D.getMonth();

D.getYear();

D.display(); //output

System.out.println("Enter Day Month Year");

D1.setDay(D1.dd=sc.nextInt()); //input

D1.setMonth(D1.mm=sc.nextInt());

D1.setYear(D1.yy=sc.nextInt());

D1.getDay(); //return

D1.getMonth();

D1.getYear();

D1.display();

}

}

output: Enter Day Month Year

22 8 2021

22/8/2021

Enter Day Month Year

29 9 2022

29/9/2022

---------------------------------------------------------------------------------------------------------------------------------------------

2:Create Employee class with members id(int),name(string),dob(Date).Use above created Date class.

Write default and parameterised constructor in Employee Class.Write accept() function to accept information and display() to display emp information.

package add;

import java.util.Scanner;

public class employee {

public int id;

public String name;

public int dob;

public employee() { //default

id=25;

name="Komal";

dob=1/4/1996;

}

public employee(int id,String name,int dob) { //paramerterized

this.id=id;

this.name=name;

this.dob=dob;

}

public void setid(int id)

{

this.id=id;

}

public void setname(String name)

{

this.name=name;

}

public void setdob(int dob)

{

this.dob=dob;

}

public int getid()

{

return id;

}

public String getname() //getter

{

return name;

}

public int getdob()

{

return dob;

}

public void display()

{

System.out.println("employee Details:"+id+" " +name+" "+dob);

}

public static void main(String[] args) {

// TODO Auto-generated method stub

System.out.println("Enter employee Details:id,name,dob:");

Scanner sc=new Scanner(System.in);

employee e = new employee();

//employee e1 = new employee();

e.setid(e.id=sc.nextInt());

e.setname(e.name=sc.next());

e.setid(e.dob=sc.nextInt());

e.getid();

e.getname();

e.getdob();

e.display();

/\*e1.setid(e1.id=sc.nextInt());

e1.setname(e1.name=sc.next());

e1.setid(e1.dob=sc.nextInt());

e1.getid();

e1.getname();

e1.getdob();

e1.display();\*/

}

}

output:Enter employee Details:id,name,dob:

1

Ashwini

2/3/1997

employee Details:1 Ashwini 2/3/1997

------------------------------------------------------------------------------------------------------------------------------------------------------

3:Consider that payroll software needs to be developed for computerization of

operations of an ABC organization. The organization has employees.

3.1. Construct a class Employee with following members using private access

specifies:

Employee Id integer

Employee Name string

Basic Salary double

HRA double

Medical double=1000

PF double

PT double

Net Salary double

Gross Salary double

Please use following expressions for calculations://Note:Don't accept HRA,PF PT from user

\* HRA = 50% of Basic Salary

\* PF = 12% of Basic Salary

\* PT = Rs. 200

3.2. Write methods to display the details of an employee and calculate the gross

and net salary.

\* Goss Salary = Basic Salary + HRA + Medical

\* Net Salary = Gross Salary – (PT + PF)

Create Object of employee class and assign values and display Details.

package day7assign;

public class PayrollClass {

private int empId;

private String name;

private double Bsalary;

private double HRA;

private double PF;

private static double PT;

private static double medical;

private double netSal;

private double grosSal;

static {

medical = 1000;

PT = 200;

}

public PayrollClass() {

empId = 101;

name = "xyz";

Bsalary = 10000;

}

public PayrollClass(int empId, String name, double Bsalary) {

this.empId = empId;

this.name = name;

this.Bsalary = Bsalary;

this.netSal = netSal;

this.grosSal = grosSal;

this.HRA = HRA;

this.PF = PF;

}

public void calGrosSalary() {

HRA = (50 \* Bsalary) / 100;

PF = (12 \* Bsalary) / 100;

grosSal = Bsalary + medical + HRA;

}

public void calNetSalary() {

netSal = grosSal - (PT + PF);

}

public void displayDetails() {

System.out.println("Employee Id:" + empId);

System.out.println("employee name:" + name);

System.out.println("Basic Salary:" + Bsalary);

System.out.println("Gross Salary:" + grosSal);

System.out.println("Net Salary :" + netSal);

}

}

package Tester;

import java.util.Scanner;

import day7assign.PayrollClass;

public class TestPayroll {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

System.out.println("Enter employee id ,Name, Basic salary");

PayrollClass emp1=new PayrollClass(sc.nextInt(),sc.next(),sc.nextDouble());

emp1.calGrosSalary();

emp1.calNetSalary();

emp1.displayDetails();

}

}

output:Enter employee id ,Name, Basic salary

1

Vaishnavi

90000

Employee Id:1

employee name:Vaishnavi

Basic Salary:90000.0

Gross Salary:136000.0

Net Salary :125000.0

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