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**FA16-BSE-102**

**LAB 1**

**Q1: Write a program to add values in an integer array.**

Initialize an integer

\* Initialize array

\*then ask user to enter values

\* add those values

\* and then print answer

\*

\*

\* @author fa16-bse-102

\*/

public class LAB1 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args)

int a;

int sum=0;

int array[]= new int[4];

Scanner input = new Scanner(System.in) ;

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

System.out.println("enter values in an array");

a= input.nextInt();

sum=sum+a;

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

}

}

**Q2: Write a program to print Fibonacci series.**

Initialize values n1 n2 i n3 count

\* print n2

\* Loop to print the series

\* adding values of n1 and n2 and storing values in n3

\*initializing n1 as n2

\* initializing n2 as n3

\* print the series.

\*

\*

\* @author fa16-bse-102

\*/

public class Q2 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

// TODO code application logic here

int n1=0,n2=1, i , n3, count=10;

System.out.print(n2);

for(i=2;i<count;++i)//loop starts from 2 because 0 and 1 are already printed

{

n3=n1+n2;

n1=n2;

n2=n3;

System.out.print(" "+n3);

}

}

}

**Q3: Write a program to find if an integer is palindrome or not.**

package q3;

import java.util.Scanner;

/\*\*

\* Q3: write a program to find if an integer is palindrome or not

\*

\* @author fa16-bse-102

\*/

public class Q3 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

Scanner input=new Scanner(System.in);

System.out.println("input value to check wether it is a palindrome or not");

int i=input.nextInt();

int n=i;

int reverse=0;

while(n !=0){

reverse =reverse\*10;

reverse= n%10;

n=n/10;

}

if(1==reverse){

System.out.println("the number"+i+ "is a palindrome" );

}

else{

System.out.println("the number "+i+ "is not a palindrome");

}

}

}

**Q4: Write a program to print hailstone sequence**

package q4;

/\*\*

\*

\* @author fa16-bse-102

\*/

public class Q4 {

static int c;

static int HailstoneNumbers(int N){

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

if ( N==1 && c==0 )

return c;

else if(N==1 && c!=0){

c++;

return c;

}

else if(N%2==0){

c++;

/\* when even\*/

HailstoneNumbers(N/2);

}

else if(N%2!=0){

c++;

// when odd

HailstoneNumbers(3\*N+1);

}

return c;

}

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

int N =7;

int x;

x= HailstoneNumbers(N);

System.out.println();

System.out.println("number of steps= " +x);

}

}

**Q5: design a basic calculator application.**

package q5;

import java.util.Scanner;

/\*\*

\*

\* @author fa16-bse-102

\*/

public class Q5 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

// TODO code application logic here

calculator c =new calculator();

int option=0;

int n1, n2;

Scanner input= new Scanner(System. in);

System.out.println("\*\*\*Main Menu\*\*\*");

System.out.println("[1] sum");

System.out.println("[2] product");

System.out.println("[3] subtraction ");

System.out.println("[4] division");

option= input.nextInt();

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

n1= input.nextInt();

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

n2= input.nextInt();

switch(option){

case 1:

System.out.println(c.sum(n1,n2));

break;

case 2:

System.out.println(c.product(n1,n2));

break;

case 3:

System.out.println(c.subtraction(n1,n2));

break;

case 4:

System.out.println (c.division(n1, n2));

default:

break;

}

}

}

public class calculator {

public double sum (double a, double b){

return a+b;

}

public double product (double a, double b){

return a\*b;

}

public double subtraction (double a, double b){

return a-b;

}

public double division(double a, double b){

return a/b;

}

}

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