01. Write a program in java for fibonocci series using for loop

import java.util.Scanner;

class Fibonacci

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

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

int n=sc.nextInt();

int i=0,j=1,nextTerm;

System.out.println("Fibonacci series is ");

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

{

if(c<=1)

nextTerm=c;

else

{

nextTerm=i+j;

i=j;

j=nextTerm;

}

System.out.println(nextTerm);

}

}

}

02. Write a program to calculate perimeter of Rhombus

import java.util.Scanner;

class PerimeterOfRhombus

{

public static void main(String args[])

{

Scanner s= new Scanner(System.in);

System.out.println("Enter the side of the Rhombus:");

double a= s.nextDouble();

double perimeter=4\*a;

System.out.println("perimeter of Rhombus is: " + perimeter);

}

}

03. Write a java program to convert Fahrenhit to celsious using switch case method

import java.util.Scanner;

class FC

{

public static void main(String arg[])

{

double f,c;

Scanner sc=new Scanner(System.in);

System.out.println("Choose type of conversion \n 1.Fahrenheit to Celsius \n 2.Celsius to Fahrenheit");

int ch=sc.nextInt();

switch(ch)

{

case 1: System.out.println("Enter Fahrenheit temperature");

f=sc.nextDouble();

c=(f-32)\*5/9;

System.out.println("Celsius temperature is = "+c);

break;

case 2: System.out.println("Enter Celsius temperature");

c=sc.nextDouble();

f=((9\*c)/5)+32;

System.out.println("Fahrenheit temperature is = "+f);

break;

default: System.out.println("please choose valid choice");

}

}

}

04. Write a java program to implement heap sort algorithm

import java.util.Scanner;

public class HSort

{

public static void heapify(int a[],int i,int n)

{

int l=2\*i+1;

int r=2\*i+2;

int temp,largest;

if(l<n && a[l]>a[i])

largest=l;

else

largest=i;

if(r<n && a[r]>a[largest])

largest=r;

if(largest !=i)

{

temp=a[largest];

a[largest]=a[i];

a[i]=temp;

heapify(a,largest,n);

}

}

public static void bheap(int a[])

{

for(int i=(a.length/2)-1;i>=0;i--)

{

heapify(a,i,a.length);

}

}

public static void Sort(int a[])

{

int temp,j,i;

bheap(a);

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

{

temp=a[0];

a[0]=a[i];

a[i]=temp;

heapify(a,0,i--) ;

}

}

public static void printarray(int a[])

{

System.out.println();

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

{

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

}

}

public static void main(String[] args)

{

int n, res,i;

Scanner s = new Scanner(System.in);

System.out.print("Enter number of elements in the array:");

n = s.nextInt();

int a[] = new int[n];

System.out.println("Enter "+n+" elements ");

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

{

a[i] = s.nextInt();

}

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

printarray(a);

Sort(a);

System.out.println( "\nelements after sorting");

printarray(a);

}

}