Q1 //wap a program to calculate fibonacci series

public class Main

{

class fibonacii

static int fib(int n)

{

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

return 0;

else

if (n==2)

return 1;

return fib(n-1) +fib(n-2)

}

public static void main(String[] args) {

int n = n

System.out.println(fib(n));

}

}

Q3

// wap program to implement heap sort algoritm

def heapify(arr, n, i):

largest = i

l = 2 \* i + 1

r = 2 \* i + 2

if l < n and arr[i] < arr[l]:

largest = l

if r < n and arr[largest] < arr[r]:

largest = r

if largest != i:

(arr[i], arr[largest]) = (arr[largest], arr[i])

heapify(arr, n, largest)

def heapSort(arr):

n = len(arr)

for i in range(n // 2 - 1, -1, -1):

heapify(arr, n, i)

for i in range(n - 1, 0, -1):

(arr[i], arr[0]) = (arr[0], arr[i])

heapify(arr, i, 0)

arr = [12, 11, 13, 5, 6, 7, ]

heapSort(arr)

n = len(arr)

print('Sorted array is')

for i in range(n):

print(arr[i])