Name:-Jadhav Sayali Saibaba
Roll no:-2321074

Assignment -7

```java
import java.util.*;
class heap_sort
{
int heap[]=new int[100],n;


void accept()
{       Scanner s=new Scanner(System.in);
        int i;

        System.out.println("enter count of numbers");
        n=s.nextInt();

        System.out.println("enter   numbres \t:");


        for(i=1;i<=n;i++)
        {
        heap[i]=s.nextInt();
        }

}
void disp()
{
        System.out.println("sorted numbers are\n:");
        for(int i=1;i<=n;i++)
        {
        System.out.println(heap[i]);
        }
```

```
}


void heap_create()
{

        heap[0]=n;
        for(int i=n/2;i>=1;i--)
        {
                adj(i);
        }
}
void sort()
{
        int last,temp;
        heap[0]=5;
        while(heap[0]>1)
        {
                last=heap[0];
                temp=heap[last];
                heap[last]=heap[1];
                heap[1]=temp;
                heap[0]--;
                adj(1);
        }
}
void adj(int i)
{       int j,temp;
        while(2*i<=heap[0])
        {
                j=2*i;
                if(j+1<=heap[0]&&heap[j+1]>heap[j])
                {
                        j++;
                }
                if(heap[i]<heap[j])
                {
```

```java
                temp=heap[i];
                heap[i]=heap[j];
                heap[j]=temp;
                i=j;
                }
                else
                        break;
        }
}


public static void main(String arg[])
{



        heap_sort h=new heap_sort();
        h.accept();
        h.heap_create();
        h.sort();
        h.disp();

}
}
```

Output:-

enter count of numbers

5

enter   numbres :

23 2 12 4 16

sorted numbers are

: