

Assignment 07

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Code:-

```
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 nombres \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])
        {
            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 :-

```
student@dbsl16:~$ java heap_sort
```

```
enter count of numbers
```

```
5
```

```
enter  numbres      :
```

```
33
```

```
22
```

```
19
```

```
89
```

```
25
```

```
sorted numbers are :
```

```
19
```

```
22
```

```
25
```

```
33
```

```
89
```

```
student@dbsl16:~$
```

```
*/
```