



## CEVAPLAR

```
void right(int i, int p, int n, int k)
{
    cout << i << endl;
    if(n == k) return;
    else right(i+p, p, n+1, k);
}

void down(int i, int p, int n, int k)
{
    if(n == k) cout << i << endl;
    else right(i, p, 1, k);

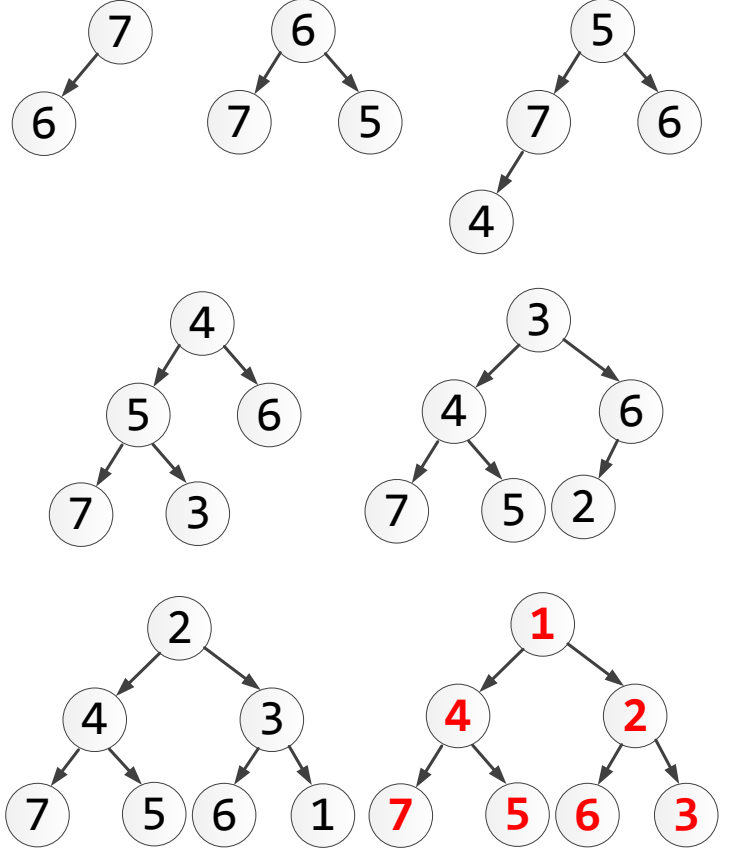
    if(i == 1) return;
    else down(i/2, p/2, 1, k*2);
}

void main()
{
    down(8, 16, 1, 1);
}
```

Çıktı

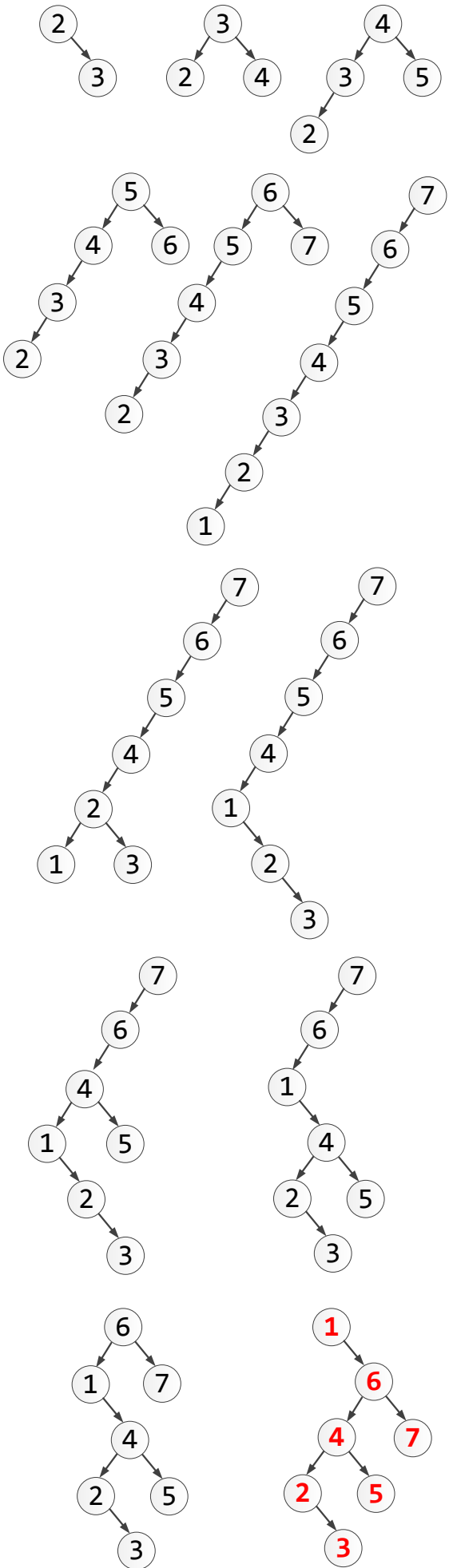
8  
4  
12  
2  
6  
10  
14  
1  
3  
5  
7  
9  
11  
13  
15

1. Yukarıdaki programın çıktısı nedir? (25P)



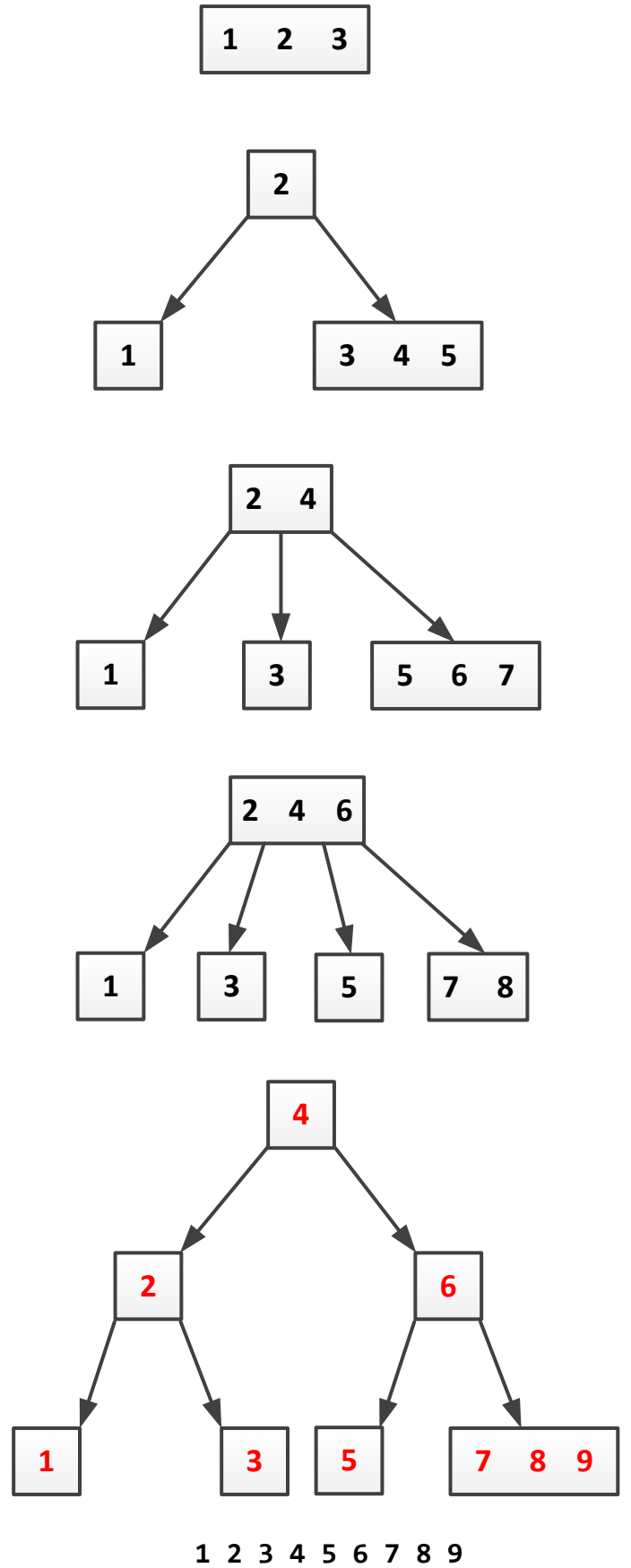
7 6 5 4 3 2 1

2. Yukarıdaki verileri Heap'e ekleyiniz. (25P)



2 3 4 5 6 7 1

3. Yukarıdaki verileri Splay Ağacı'na ekleyiniz. (25P)



1 2 3 4 5 6 7 8 9

4. Yukarıdaki verileri 2-3-4 Ağacı'na ekleyiniz. (25P)