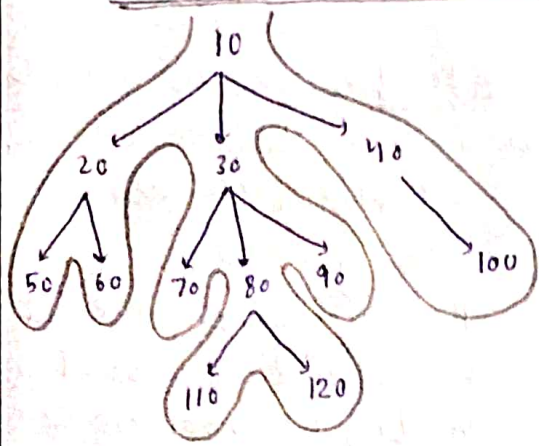
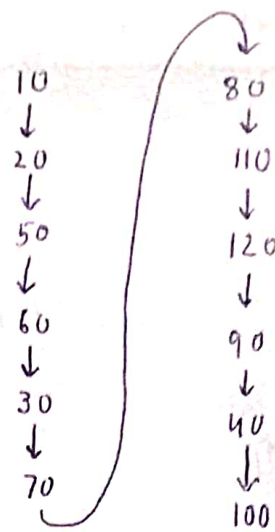


# LINEARIZE A GENERIC TREE



LINEARIZING  
(Pre-Order  
me  
linearized  
hojaye)

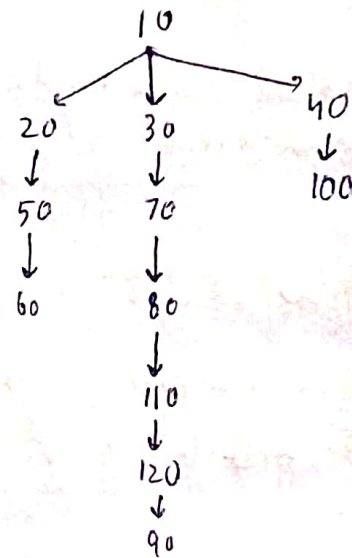


Faith: Humne faith rakha ki (20), (30), (40) linear hona janty hai!

Code

```

public static void linearize(Node node)
{
    for (Node child : node.children)
    {
        linearize(child);
    }
}
  
```



FINAL CODE →  $O(n^2)$

```

public static Node getTail(Node node)
{
    while (node.children.size() != 1)
    {
        node = node.children.get(0);
    }
    return node;
}
  
```

```

public static void linearize(Node node)
{
    for (Node child : node.children)
    {
        linearize(child);
    }
}
  
```

while (node.children.size() > 1)

```

{
    Node lc = node.children.remove(node.children.size() - 1);
    Node sl = node.children.get(node.children.size() - 1);
    Node stl = getTail(sl);
    stl.children.add(lc);
}
  
```

→ Last child ko remove kiya

→ Second last child ka tail nikal ki!

→ Second last child ki tail ko last child jo remove kiya tha vo add kr dia!

Line  
FAITH

public  
{

Node  
while

{

Node

Node

set

{

set

}