TREE-INSERT(T, z)

```
y = NIL
x = T.root
while x ≠ NIL
      y = x
      if z.key < x.key
          x = x.left
      else x = x.right
z.p = y
if y == NIL
    T.root = z          // tree T was empty
elseif z.key < y.key
    y.left = z
else y.right = z
```