```python
## Piyachai Vichaporn 67011270
## Assignment 10


class Node:
  def __init__(self,key):
    self.left = None
    self.right = None
    self.val = key

def insert(root,key):
  if root is None:
    return Node(key)

  else:
    if root.val == key:
      return root
    elif root.val < key:
      root.right = insert(root.right,key)
    else:
      root.left = insert(root.left,key)
  return root


def inorder(root):
  if root:
    inorder(root.left)
    print(root.val)
    inorder(root.right)


def Postorder(root):
  if root:
    Postorder(root.left)
    Postorder(root.right)
    print(root.val)


def Preorder(root):
  if root:
    print(root.val)
    Preorder(root.left)
    Preorder(root.right)
```

```python
## Piyachai Vichaporn 67011270
## Assignment 10.1
```

```python
r = Node(10)
r = insert(r, 20)
r = insert(r, 30)
r = insert(r, 40)
r = insert(r, 50)
r = insert(r, 60)
r = insert(r, 70)

print("Assignemt 10.1: ")
inorder(r)
```

```
Assignemt 10.1:
10
20
30
40
50
60
70
```

Assignment 10.2

```python
r = Node(70)
r = insert(r, 60)
r = insert(r, 50)
r = insert(r, 40)
r = insert(r, 30)
r = insert(r, 20)
r = insert(r, 10)

print("Assingment 10.2: ")
Postorder(r)
```

```
Assingment 10.2:
10
20
30
40
50
60
70
```

Assignment 10.3

```python
r = Node(10)
r = insert(r, 20)
r = insert(r, 30)
r = insert(r, 40)
r = insert(r, 50)
r = insert(r, 60)
```

```
r = insert(r, 60)
r = insert(r, 70)

print("Assingment 10.3: ")
Preorder(r)
```

```
Assingment 10.3:
10
20
30
40
50
60
70
```