

23. Trees :: Binary Search Trees :: *find()*

With *findNode()* implemented, implementing *find()* is trivial:

Method BST.*find*(In: *key*: K) Returns E

```
Node<K, E> node = findNode(this.root, key)
```

```
If node is not null and node.key = key Then
```

```
    Return node.data
```

```
Else
```

```
    Return null
```

```
End If
```

```
End Method BST.find
```

23. Trees :: Binary Search Trees :: *add()*

add() adds a new element containing *data* with key *key* into the BST at the proper location based on *key*. If an element with key *key* already exists in the BST, the data in that element will be replaced with *data*:

Method BST.*add*(In: *key*: K; In: *data*: E) Returns Nothing

```
Node<K, E> node = findNode(this.root, key)
```

```
If key == node.key Then
```

```
    node.data = data
```

```
Else
```

```
    Node<K, E> newNode = new Node<K, E>(key, data)
```

```
    If node is null Then
```

```
        this.root = newNode
```

```
    ElseIf key < node.key Then
```

```
        node.leftChild = newNode
```

```
    ElseIf
```

```
        node.rightChild = newNode
```

```
    End If
```

```
End If
```

```
End Method BST.add
```