20SCS2050 - Quiz 15(5 Points)

Complete the part of the code that is covered. Assume natural (ascending) order.

(1 Point)

```
private BinNode<T> addRecursively(BinNode<T> current, final T data) {

    // TODO: check if current is null, if that is the case, return a new BinNode with the data
    if (current == null)
        return new BinNode<T>(data);

    // TODO: if current is not null...
    else {

        // TODO: if given data is smaller than current data, call addRecursively to the left,
        //  making sure to use the method's return to set current's left node
        if (d[redacted])
            current.setLeft(addRecursively(current.getLeft(), data));
```

data.compareTo(current.getData()) < 0

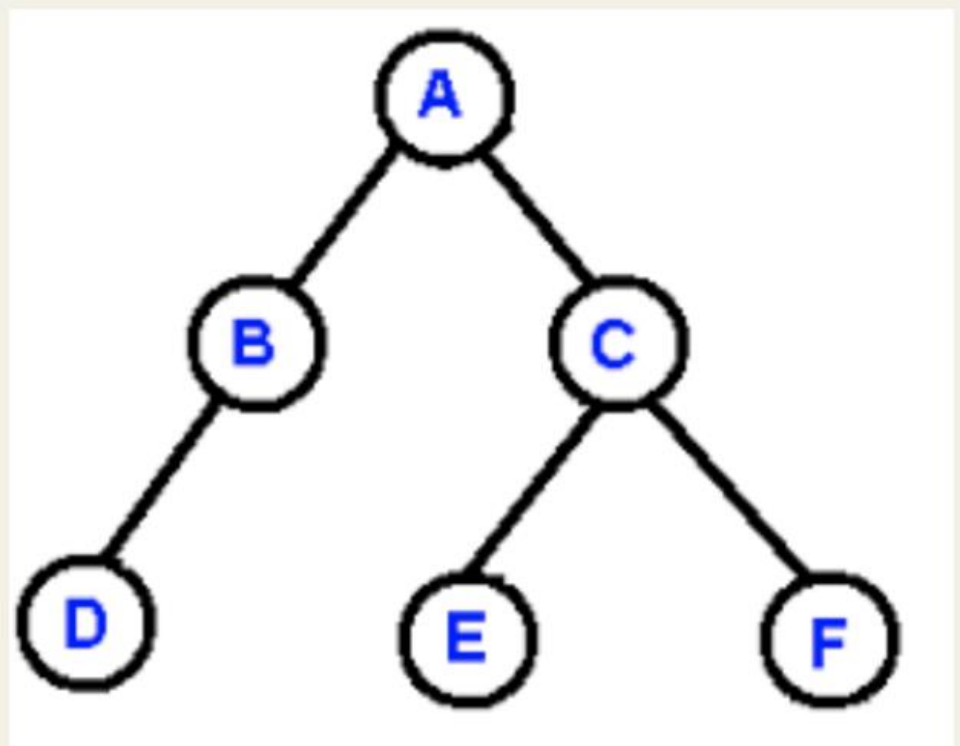
data.compareTo(current.getData()) > 0

data - current.getData() < 0

data - current.getData() > 0

Breadth first tree traversal results in ...

(1 Point)



D E F B C A

A B C D E F

A B D C E F

D B A E C F

Complete the part of the code that is covered.

(1 Point)

```
public String toString() {
    Queue<BinNode<T>> queue = new Queue<>();
    BinNode<T> current = root;
    queue.push(current);
    String str = "";
    while (!queue.isEmpty()) {
        current = [redacted]
        str += current.getData() + " ";
        if (current.getLeft() != null)
            queue.push(current.getLeft());
        if (current.getRight() != null)
            queue.push(current.getRight());
    }
    return str;
}
```

queue.getData();

queue.push();

queue.pop();

current.getNext();

Considering the add method implementation discussed in previous lesson, what can we say about the tree's height as a result of adding data elements A, B, C, D, and E in this order? Consider the root node a level on its own.

(1 Point)

it would be 2 levels height

it would be 3 levels height

it would be 4 levels height

it would be 5 levels height

Considering the add method implementation discussed in previous lesson, what can we say about the tree's height as a result of adding data elements C, A, B, D, E, and F in this order? Consider the root node a level on its own.

(1 Point)

it would be 2 levels height

it would be 3 levels height

it would be 4 levels height

it would be 5 levels height