Our Solution(s) Run Code

Solution 1

```java
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import java.util.*;

class Program {
  static class Node {
    String name;
    List<Node> children = new ArrayList<Node>();

    public Node(String name) {
      this.name = name;
    }

    // O(v + e) time | O(v) space
    public List<String> breadthFirstSearch(List<String> array) {
      Queue<Node> queue = new LinkedList<Node>();
      queue.add(this);
      while (!queue.isEmpty()) {
        Node current = queue.poll();
        array.add(current.name);
        queue.addAll(current.children);
      }
      return array;
    }

    public Node addChild(String name) {
      Node child = new Node(name);
      children.add(child);
      return this;
    }
  }
}

```

Your Solutions Run Code

Solution 1 Solution 2 Solution 3

```java
import java.util.*;

class Program {
  // Do not edit the class below except
  // for the breadthFirstSearch method.
  // Feel free to add new properties
  // and methods to the class.
  static class Node {
    String name;
    List<Node> children = new ArrayList<Node>();

    public Node(String name) {
      this.name = name;
    }

    public List<String> breadthFirstSearch(List<String> array) {
      // Write your code here.
      return null;
    }

    public Node addChild(String name) {
      Node child = new Node(name);
      children.add(child);
      return this;
    }
  }
}

```

Custom Output Raw Output Submit Code

Run or submit code when you're ready.