

```
public static int compute(int number) {  
    if (number <= 2) {  
        return 1;  
    }  
  
    return compute(number - 1) + compute(number - 2);  
}
```

The diagram illustrates the recursive call stack for the `compute` function. It shows a sequence of nodes connected by lines, representing the state of the function at different points in its execution. The nodes are colored: purple, orange, and grey. The sequence starts with a purple node at the top, which branches into two orange nodes. These orange nodes then lead to a grey node, which finally leads to a purple node. The diagram is positioned over the recursive call line of the code, specifically over `compute(number - 1)` and `compute(number - 2)`.