

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

The diagram illustrates the recursive calls for the `compute` function. Nodes are represented by colored circles (purple, orange, yellow) and lines represent the flow of recursive calls. The diagram shows the sequence of calls for `compute(5)`, branching into `compute(4)` and `compute(3)`, which further branch into `compute(3)` and `compute(2)`, and so on, eventually reaching the base case of `compute(1)` and `compute(2)`.