

```
public static int compute(int a, int b) {  
    if (b == 0) {  
        return 1;  
    }  
    if (b == 1) {  
        return a;  
    }  
    return a * compute(a, b - 1);  
}
```

The diagram illustrates the recursive execution of the `compute` function. It features a network of nodes and edges:

- Nodes:** Represented by colored circles (purple, orange, yellow) placed over the code. Purple nodes are located at the start of the function, the `if (b == 0)` block, and the `return a * compute(a, b - 1);` line. Orange nodes are located at the `if (b == 1)` block and the `return a * compute(a, b - 1);` line. Yellow nodes are located at the `return a * compute(a, b - 1);` line.
- Edges:** Represented by lines connecting nodes, showing the flow of recursive calls and returns. Purple lines connect the start of the function to the `if (b == 0)` block and the `return a * compute(a, b - 1);` line. Orange lines connect the `if (b == 1)` block and the `return a * compute(a, b - 1);` line. Yellow lines connect the `return a * compute(a, b - 1);` line to the `return a * compute(a, b - 1);` line.