

```
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 execution flow of the recursive function `compute`. It shows a call tree where each node represents a function call. The root node is `compute(a, b)`. The tree branches out to show the recursive calls and returns. The nodes are colored in shades of purple, orange, and yellow, and are connected by lines representing the flow of execution. The tree shows the sequence of recursive calls and returns, starting from the initial call at the top and branching out to show the base cases and the recursive step.