

```
public static int compute(int value) {  
    if (value == 1) {  
        return 1;  
    }  
    return compute(value - 1) * value;  
}
```

The diagram illustrates the control flow and data flow of the provided Java code. Nodes are represented by colored circles, and lines represent the flow of execution or data.

- Purple Nodes:** These nodes trace the execution path of the function. They start at `public static`, move to `int`, then to `compute`, then to `{`, then to `return compute`, and finally to `}`.
- Orange Nodes:** These nodes trace the execution path of the recursive call and the base case. They start at `compute`, move to `(int value)`, then to `{`, then to `return 1;`, and finally to `}`.
- Yellow Nodes:** These nodes trace the data flow of the recursive call. They start at `value`, move to `value - 1`, and then to `*`.