

```
public static int compute(int number) {  
    if (number == 0) {  
        return 0;  
    }  
  
    return (number % 10) + compute((int) number / 10);  
}
```

The diagram illustrates the recursive process of the `compute` function. It shows the sequence of recursive calls and returns, with nodes representing function calls and edges representing the flow of control and data. The nodes are colored: purple for the initial call and return, yellow for the base case, and orange for the recursive calls and returns. The edges show the flow from the initial call to the base case, and then back up the call stack as the recursive calls return their values.