

```
public static int compute(String string1, String string2) {  
    int x;  
    if (string1.length() < string2.length()) {  
        x = string1.length();  
    } else {  
        x = string2.length();  
    }  
    int result = 0;  
    for (int i = 0; i < x; i++) {  
        if (string1.charAt(i) == string2.charAt(i)) {  
            result++;  
        }  
    }  
    return result;  
}
```

The diagram illustrates a network of nodes and edges overlaid on the code. Nodes are represented by colored circles: purple, orange, yellow, and grey. Edges are represented by colored lines connecting these nodes. The nodes are distributed across the code, with a dense cluster of purple nodes at the top, orange nodes in the middle, and yellow nodes at the bottom. Grey nodes are also present, particularly around the 'if' statement and the 'for' loop. The edges connect nodes across different lines of code, such as from the 'if' statement to the 'x' assignment, and from the 'for' loop to the 'result' variable.