

A network diagram is overlaid on the code. It consists of numerous circular nodes in various colors (purple, yellow, orange, red, grey) connected by thin lines. The nodes are distributed across the image, with a higher density on the left side. Some nodes are positioned directly over the code text, while others are in the margins. The connections between nodes form a complex web, with some nodes acting as hubs with many connections and others as isolated or sparsely connected points.

```
public static String removeDoubleCharacters(String str) {  
    if (str.isEmpty()) {  
        return str;  
    }  
  
    StringBuilder result = new StringBuilder();  
  
    char prev = str.charAt(0);  
    result.append(prev);  
    for (int i = 1; i < str.length(); i++) {  
        char cur = str.charAt(i);  
        if (prev != cur) {  
            result.append(str.charAt(i));  
        }  
        prev = cur;  
    }  
    return result.toString();  
}
```