

The diagram illustrates variable references in the provided Java code. Colored circles are placed next to variable names, and lines connect them to show their scope and usage:

- Class Scope (Purple):** `public class`, `Vehicle`, and `String` in the first line.
- Method Scope (Yellow):** `public` in the constructor and `void` in the `accelerate` method.
- Local Scope (Orange):** `kmh` in the `accelerate` method.
- Instance Scope (Red):** `this` in the constructor and `this` in the `accelerate` method.

```
public class Vehicle {  
    String producer, type;  
    int topSpeed, currentSpeed;  
  
    public Vehicle(String p, String t, int tp) {  
        this.producer = p;  
        this.type = t;  
        this.topSpeed = tp;  
        this.currentSpeed = 0;  
    }  
  
    public void accelerate(int kmh) {  
        if ((this.currentSpeed + kmh) > this.topSpeed) {  
            this.currentSpeed = this.topSpeed;  
        } else {  
            this.currentSpeed = this.currentSpeed + kmh;  
        }  
    }  
}
```