

```
public static int sumArray(int[] array) {  
    int result = 0;  
    for (int i = 0; i < array.length; i++) {  
        result = result + array[i];  
    }  
    return result;  
}
```

The diagram illustrates the state of variables during the execution of the `sumArray` method. It features several colored circles (purple, orange, yellow) connected by lines to the variables they reference in the code:

- Method Signature:** `public static int sumArray(int[] array)`
  - A purple circle is connected to `public`.
  - A yellow circle is connected to `int`.
  - A purple circle is connected to `sumArray`.
  - A yellow circle is connected to `int[]`.
  - A purple circle is connected to `array`.
- Initialization:** `int result = 0;`
  - A purple circle is connected to `int`.
  - A purple circle is connected to `result`.
  - A purple circle is connected to `=`.
  - A purple circle is connected to `0`.
- Loop Header:** `for (int i = 0; i < array.length; i++)`
  - A purple circle is connected to `int`.
  - A purple circle is connected to `i`.
  - A purple circle is connected to `=`.
  - A purple circle is connected to `0`.
  - A purple circle is connected to `i`.
  - A purple circle is connected to `<`.
  - A purple circle is connected to `array`.
  - A purple circle is connected to `.length`.
  - A purple circle is connected to `i`.
  - A purple circle is connected to `++`.
- Loop Body:** `result = result + array[i];`
  - A purple circle is connected to `result`.
  - A purple circle is connected to `=`.
  - A purple circle is connected to `result`.
  - A purple circle is connected to `+`.
  - A purple circle is connected to `array`.
  - A purple circle is connected to `[i]`.
- Return Statement:** `return result;`
  - A purple circle is connected to `return`.
  - A purple circle is connected to `result`.