## Chapter 8: Aggregation

### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>pipeline</code></td>
<td>Array of aggregation stages</td>
</tr>
<tr>
<td><code>options</code></td>
<td>Optional additional options to modify the pipeline</td>
</tr>
</tbody>
</table>

### Example

```javascript
db.sales.aggregate([{
  $group: {
    _id: '$product',
    total: { $sum: '$quantity' }
  }
}])
```

### Notes

- `$group` stage is used to group documents.
- `$sum` stage is used to sum up numeric values.

### Exercises

1. Group documents by their `product` and calculate the total quantity for each product.
2. Count the number of orders for each `product`.

---

## Chapter 9: Indexes

### Section 9.1: Index Creation Basics

- **Index Creation**
  - Use `createIndex` method to create an index on a collection.
  - Example:
    ```javascript
    db.sales.createIndex({ product: 1 })
    ```

### Notes

- Indexes improve query performance by allowing faster lookups.
- Use `indexes` method to view existing indexes on a collection.

---

**Disclaimer**

This is an unofficial free book created for educational purposes and is not affiliated with official MongoDB group(s) or company(s). All trademarks and registered trademarks are the property of their respective owners.
End of ebook preview
Download the full PDF tutorial from the link below:

Click Here