

a. Insert a new product into the database.

```
db.Products.insertOne({
  name: "Product Name",
  description: "Product Description",
  price: 29.99,
  category: "Electronics",
  stockQuantity: 100
})
```

Output:

```
{
  acknowledged: true,
  insertedId: ObjectId("64b228fb8050f20376310b37")
}
```

b. Update the stock quantity of a product when an order is placed or cancelled.

```
db.Products.updateOne(
  { _id: ObjectId("64b2292c8050f20376310b39") },
  { $inc: { stockQuantity: -1 } }
)// For cancelling an order
```

Output:

```
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

```
db.Products.updateOne(
  { _id: ObjectId("64b2290f8050f20376310b38") },
  { $inc: { stockQuantity: 1 } }
)
```

Output:

```
{
```

```
        acknowledged: true,
        insertedId: null,
        matchedCount: 1,
        modifiedCount: 1,
        upsertedCount: 0
    }
}
```

c. Retrieve a list of products in a specific category, sorted by price.

```
db.Products.find({ category: "Electronics" }).sort({ price: 1})
```

Output:

```
{
  _id: ObjectId("64b226ea8050f20376310b36"),
  name: 'Product Name',
  description: 'Product Description',
  price: 99.99,
  category: 'Electronics',
  stockQuantity: 10
}
{
  _id: ObjectId("64b228fb8050f20376310b37"),
  name: 'cooler',
  description: 'abcdnfghsdfkkgm',
  price: 5000,
  category: 'Electronics',
  stockQuantity: 5
}
{
  _id: ObjectId("64b2290f8050f20376310b38"),
  name: 'Freeze',
  description: 'yuilrkjfdgsfdfj',
  price: 10000,
  category: 'Electronics',
  stockQuantity: 2
}
```

d. Search for products within a given price range and display only those with available stock.

```
    db.Products.find({
      price: { $gte: 50, $lte: 10000 },
      stockQuantity: { $gt: 0 }
    })
```

OutPut:

```
{
  _id: ObjectId("64b226ea8050f20376310b36"),
  name: 'Product Name',
  description: 'Product Description',
  price: 99.99,
  category: 'Electronics',
  stockQuantity: 10
}

{
  _id: ObjectId("64b228fb8050f20376310b37"),
  name: 'cooler',
  description: 'abcdefghijklkgkm',
  price: 5000,
  category: 'Electronics',
  stockQuantity: 5
}

{
  _id: ObjectId("64b2290f8050f20376310b38"),
  name: 'Freeze',
  description: 'yuilrkjfdgsfdfj',
  price: 10000,
  category: 'Electronics',
  stockQuantity: 2
}
```

e. Retrieve the details of a specific product by its unique identifier.

```
db.products.findOne({ _id: ObjectId("64b2290f8050f20376310b38") })
```

Output:

```
_id: ObjectId("64b22054966b639e4c1429b8"),  
name: 'headphones',  
description: 'Wireless headphones',  
price: 89.99,  
category: 'electronic',  
stockQuantity: 30  
}
```



