

MongoDB Task 01

Product JSON: <https://github.com/rvsp/database/blob/master/mongodb/product.json>

```
>_MONGOSH
> use Task_01_MongoDB
< switched to db Task_01_MongoDB
> db.createCollection('products')
< { ok: 1 }
> show databases
< Task_01_MongoDB      8.00 KiB
   fsd59wtdtdb        72.00 KiB
   sample_airbnb       52.70 MiB
   sample_analytics    9.56 MiB
   sample_geospatial  1.24 MiB
   sample_guides       40.00 KiB
   sample_mflix        116.04 MiB
   sample_restaurants  6.55 MiB
   sample_supplies     1.05 MiB
   sample_training     53.37 MiB
   sample_weatherdata  2.60 MiB
   admin               280.00 KiB
   local               85.44 GiB
```

1. Find all the information about each products.

db.products.find()

```
> db.products.find();
< [
  {
    _id: ObjectId('6677d6edfc4777ec4d66f4ae'),
    id: '1',
    product_name: 'Intelligent Fresh Chips',
    product_price: 655,
    product_material: 'Concrete',
    product_color: 'mint green'
  },
  {
    _id: ObjectId('6677d6edfc4777ec4d66f4af'),
    id: '2',
    product_name: 'Practical Fresh Sausages',
    product_price: 911,
    product_material: 'Cotton',
    product_color: 'indigo'
  }
]
```

```
>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b0'),
  id: '3',
  product_name: 'Refined Steel Car',
  product_price: 690,
  product_material: 'Rubber',
  product_color: 'gold'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b1'),
  id: '4',
  product_name: 'Gorgeous Plastic Pants',
  product_price: 492,
  product_material: 'Soft',
  product_color: 'plum'
}
```

>_MONGOSH

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b2'),
  id: '5',
  product_name: 'Sleek Cotton Chair',
  product_price: 33,
  product_material: 'Fresh',
  product_color: 'black'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b3'),
  id: '6',
  product_name: 'Awesome Wooden Towels',
  product_price: 474,
  product_material: 'Plastic',
  product_color: 'orange'
}
```

>_MONGOSH

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b4'),
  id: '7',
  product_name: 'Practical Soft Shoes',
  product_price: 500,
  product_material: 'Rubber',
  product_color: 'pink'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b5'),
  id: '8',
  product_name: 'Incredible Steel Hat',
  product_price: 78,
  product_material: 'Rubber',
  product_color: 'violet'
}
```

>_MONGOSH

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b6'),
  id: '9',
  product_name: 'Awesome Wooden Ball',
  product_price: 28,
  product_material: 'Soft',
  product_color: 'azure'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b7'),
  id: '10',
  product_name: 'Generic Wooden Pizza',
  product_price: 84,
  product_material: 'Frozen',
  product_color: 'indigo'
}
```

>_MONGOSH

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b8'),
  id: '11',
  product_name: 'Unbranded Wooden Cheese',
  product_price: 26,
  product_material: 'Soft',
  product_color: 'black'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b9'),
  id: '12',
  product_name: 'Unbranded Plastic Salad',
  product_price: 89,
  product_material: 'Wooden',
  product_color: 'pink'
}
```

>_MONGOSH

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4ba'),
  id: '13',
  product_name: 'Gorgeous Cotton Keyboard',
  product_price: 37,
  product_material: 'Concrete',
  product_color: 'sky blue'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bb'),
  id: '14',
  product_name: 'Incredible Steel Shirt',
  product_price: 54,
  product_material: 'Metal',
  product_color: 'white'
}
```

>_MONGOSH

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bc'),
  id: '15',
  product_name: 'Ergonomic Cotton Hat',
  product_price: 43,
  product_material: 'Rubber',
  product_color: 'mint green'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bd'),
  id: '16',
  product_name: 'Small Soft Chair',
  product_price: 47,
  product_material: 'Cotton',
  product_color: 'teal'
}
```

>_MONGOSH

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4be'),
  id: '17',
  product_name: 'Incredible Metal Car',
  product_price: 36,
  product_material: 'Fresh',
  product_color: 'indigo'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bf'),
  id: '18',
  product_name: 'Licensed Plastic Bacon',
  product_price: 88,
  product_material: 'Steel',
  product_color: 'yellow'
}
```

>_MONGOSH

```
product_color: 'yellow'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c0'),
  id: '19',
  product_name: 'Intelligent Cotton Chips',
  product_price: 46,
  product_material: 'Soft',
  product_color: 'azure'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c1'),
  id: '20',
  product_name: 'Handcrafted Wooden Bacon',
  product_price: 36,
  product_material: 'Concrete',
  product_color: 'lime'
}
```

Type "it" for more

Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>

```

>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c2'),
  id: '21',
  product_name: 'Unbranded Granite Chicken',
  product_price: 90,
  product_material: 'Metal',
  product_color: 'gold'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c3'),
  id: '22',
  product_name: 'Ergonomic Soft Hat',
  product_price: 99,
  product_material: 'Rubber',
  product_color: 'black'
}

```

```

>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c4'),
  id: '23',
  product_name: 'Intelligent Steel Pizza',
  product_price: 95,
  product_material: 'Cotton',
  product_color: 'azure'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c5'),
  id: '24',
  product_name: 'Tasty Rubber Cheese',
  product_price: 47,
  product_material: 'Frozen',
  product_color: 'orchid'
}

```

```

>_MONGOSH
product_material: 'Cotton',
product_color: 'azure'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c5'),
  id: '24',
  product_name: 'Tasty Rubber Cheese',
  product_price: 47,
  product_material: 'Frozen',
  product_color: 'orchid'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c6'),
  id: '25',
  product_name: 'Licensed Steel Car',
  product_price: 20,
  product_material: 'Cotton',
  product_color: 'indigo'
}
Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>

```

2. Find the product price which are between 400 to 800.

```
db.products.find({ $and: [{ product_price: { $gte: 400 }}, { product_price: { lte: 600 } } ] })
```

```

>_MONGOSH
> db.products.find({$and: [{product_price: {$gte: 400}}, {product_price: {$lte: 600}}]});
< {
  _id: ObjectId('6677d6edfc4777ec4d66f4b1'),
  id: '4',
  product_name: 'Gorgeous Plastic Pants',
  product_price: 492,
  product_material: 'Soft',
  product_color: 'plum'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b3'),
  id: '6',
  product_name: 'Awesome Wooden Towels',
  product_price: 474,
  product_material: 'Plastic',
  product_color: 'orange'
}

```

```

>_MONGOSH
  product_material: 'Soft',
  product_color: 'plum'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b3'),
  id: '6',
  product_name: 'Awesome Wooden Towels',
  product_price: 474,
  product_material: 'Plastic',
  product_color: 'orange'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b4'),
  id: '7',
  product_name: 'Practical Soft Shoes',
  product_price: 500,
  product_material: 'Rubber',
  product_color: 'pink'
}
Atlas atlas-106h1q-shard-0 [primary] Task_01 MongoDB>

```

3. Find the product price which are not between 400 to 600.

db.products.find({\$nor: [{product_price: { \$gte: 400, \$lte: 600 }}}])

```

>_MONGOSH
> db.products.find({$nor:[{product_price: { $gte: 400, $lte: 600 }}}]);
< {
  _id: ObjectId('6677d6edfc4777ec4d66f4ae'),
  id: '1',
  product_name: 'Intelligent Fresh Chips',
  product_price: 655,
  product_material: 'Concrete',
  product_color: 'mint green'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4af'),
  id: '2',
  product_name: 'Practical Fresh Sausages',
  product_price: 911,
  product_material: 'Cotton',
  product_color: 'indigo'
}

```

```
>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b0'),
  id: '3',
  product_name: 'Refined Steel Car',
  product_price: 690,
  product_material: 'Rubber',
  product_color: 'gold'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b2'),
  id: '5',
  product_name: 'Sleek Cotton Chair',
  product_price: 33,
  product_material: 'Fresh',
  product_color: 'black'
}
```

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>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b5'),
  id: '8',
  product_name: 'Incredible Steel Hat',
  product_price: 78,
  product_material: 'Rubber',
  product_color: 'violet'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b6'),
  id: '9',
  product_name: 'Awesome Wooden Ball',
  product_price: 28,
  product_material: 'Soft',
  product_color: 'azure'
}
```

```
>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b7'),
  id: '10',
  product_name: 'Generic Wooden Pizza',
  product_price: 84,
  product_material: 'Frozen',
  product_color: 'indigo'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b8'),
  id: '11',
  product_name: 'Unbranded Wooden Cheese',
  product_price: 26,
  product_material: 'Soft',
  product_color: 'black'
}
```

```
>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b9'),
  id: '12',
  product_name: 'Unbranded Plastic Salad',
  product_price: 89,
  product_material: 'Wooden',
  product_color: 'pink'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4ba'),
  id: '13',
  product_name: 'Gorgeous Cotton Keyboard',
  product_price: 37,
  product_material: 'Concrete',
  product_color: 'sky blue'
}
```

```
>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bb'),
  id: '14',
  product_name: 'Incredible Steel Shirt',
  product_price: 54,
  product_material: 'Metal',
  product_color: 'white'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bc'),
  id: '15',
  product_name: 'Ergonomic Cotton Hat',
  product_price: 43,
  product_material: 'Rubber',
  product_color: 'mint green'
}
```

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>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bd'),
  id: '16',
  product_name: 'Small Soft Chair',
  product_price: 47,
  product_material: 'Cotton',
  product_color: 'teal'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4be'),
  id: '17',
  product_name: 'Incredible Metal Car',
  product_price: 36,
  product_material: 'Fresh',
  product_color: 'indigo'
}
```

```
>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4bf'),
  id: '18',
  product_name: 'Licensed Plastic Bacon',
  product_price: 88,
  product_material: 'Steel',
  product_color: 'yellow'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c0'),
  id: '19',
  product_name: 'Intelligent Cotton Chips',
  product_price: 46,
  product_material: 'Soft',
  product_color: 'azure'
}
```

```
>_MONGOSH
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c1'),
  id: '20',
  product_name: 'Handcrafted Wooden Bacon',
  product_price: 36,
  product_material: 'Concrete',
  product_color: 'lime'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c2'),
  id: '21',
  product_name: 'Unbranded Granite Chicken',
  product_price: 90,
  product_material: 'Metal',
  product_color: 'gold'
}
```

```

>_MONGOSH
  product_color: 'gold'
}
[
  {
    _id: ObjectId('6677d6edfc4777ec4d66f4c3'),
    id: '22',
    product_name: 'Ergonomic Soft Hat',
    product_price: 99,
    product_material: 'Rubber',
    product_color: 'black'
  }
  {
    _id: ObjectId('6677d6edfc4777ec4d66f4c4'),
    id: '23',
    product_name: 'Intelligent Steel Pizza',
    product_price: 95,
    product_material: 'Cotton',
    product_color: 'azure'
  }
]

```

```

>_MONGOSH
}
Type "it" for more
> it
< {
  _id: ObjectId('6677d6edfc4777ec4d66f4c5'),
  id: '24',
  product_name: 'Tasty Rubber Cheese',
  product_price: 47,
  product_material: 'Frozen',
  product_color: 'orchid'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c6'),
  id: '25',
  product_name: 'Licensed Steel Car',
  product_price: 20,
  product_material: 'Cotton',
  product_color: 'indigo'
}
Atlas atlas-106h1q-shard-0 [primary] Task_01-MongoDB>

```

4. List the four product which are greater than 500 in price .

db.products.find({product_price: { \$gte: 500 }})

db.products.find({product_price: { \$gte: 500 }}).limit(4)

```

>_MONGOSH
> db.products.find({product_price: {$gte: 500}});
< {
  _id: ObjectId('6677d6edfc4777ec4d66f4ae'),
  id: '1',
  product_name: 'Intelligent Fresh Chips',
  product_price: 655,
  product_material: 'Concrete',
  product_color: 'mint green'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4af'),
  id: '2',
  product_name: 'Practical Fresh Sausages',
  product_price: 911,
  product_material: 'Cotton',
  product_color: 'indigo'
}

```



```

>_MONGOSH
  product_material: 'Cotton',
  product_color: 'indigo'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b0'),
  id: '3',
  product_name: 'Refined Steel Car',
  product_price: 690,
  product_material: 'Rubber',
  product_color: 'gold'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b4'),
  id: '7',
  product_name: 'Practical Soft Shoes',
  product_price: 500,
  product_material: 'Rubber',
  product_color: 'pink'
}
}
Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>

```

5. Find the product name and product material of each products.

db.products.find({}, { product_name: 1, product_material: 1, _id:0})

```

>_MONGOSH
> db.products.find({}, {product_name: 1, product_material: 1, _id:0})
< {
  product_name: 'Intelligent Fresh Chips',
  product_material: 'Concrete'
}
{
  product_name: 'Practical Fresh Sausages',
  product_material: 'Cotton'
}
{
  product_name: 'Refined Steel Car',
  product_material: 'Rubber'
}
{
  product_name: 'Gorgeous Plastic Pants',
  product_material: 'Soft'
}
}

```

```

>_MONGOSH
{
  product_name: 'Sleek Cotton Chair',
  product_material: 'Fresh'
}
{
  product_name: 'Awesome Wooden Towels',
  product_material: 'Plastic'
}
{
  product_name: 'Practical Soft Shoes',
  product_material: 'Rubber'
}
{
  product_name: 'Incredible Steel Hat',
  product_material: 'Rubber'
}
{
  product_name: 'Awesome Wooden Ball',
  product_material: 'Soft'
}
}

```

```

>_MONGOSH
{
  product_name: 'Generic Wooden Pizza',
  product_material: 'Frozen'
}
{
  product_name: 'Unbranded Wooden Cheese',
  product_material: 'Soft'
}
{
  product_name: 'Unbranded Plastic Salad',
  product_material: 'Wooden'
}
{
  product_name: 'Gorgeous Cotton Keyboard',
  product_material: 'Concrete'
}
{
  product_name: 'Incredible Steel Shirt',
  product_material: 'Metal'
}
}

```

```

>_MONGOSH
{
  product_name: 'Ergonomic Cotton Hat',
  product_material: 'Rubber'
}
{
  product_name: 'Small Soft Chair',
  product_material: 'Cotton'
}
{
  product_name: 'Incredible Metal Car',
  product_material: 'Fresh'
}
{
  product_name: 'Licensed Plastic Bacon',
  product_material: 'Steel'
}
{
  product_name: 'Intelligent Cotton Chips',
  product_material: 'Soft'
}
}

```

```

>_MONGOSH
{
  product_name: 'Handcrafted Wooden Bacon',
  product_material: 'Concrete'
}
Type "it" for more
> it
< {
  product_name: 'Unbranded Granite Chicken',
  product_material: 'Metal'
}
{
  product_name: 'Ergonomic Soft Hat',
  product_material: 'Rubber'
}
}

```

```

{
  product_name: 'Intelligent Steel Pizza',
  product_material: 'Cotton'
}
{
  product_name: 'Tasty Rubber Cheese',
  product_material: 'Frozen'
}
{
  product_name: 'Licensed Steel Car',
  product_material: 'Cotton'
}
}
Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>

```

6. Find the product with a row id of 10.

db.products.findOne({ id: '10' })

```
> db.products.findOne({ id: '10' })
< {
  _id: ObjectId('6677d6edfc4777ec4d66f4b7'),
  id: '10',
  product_name: 'Generic Wooden Pizza',
  product_price: 84,
  product_material: 'Frozen',
  product_color: 'indigo'
}
```

Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>

7. Find only the product name and product material.

db.products.find({}, { product_name: 1, product_material: 1, _id:0})

```
>_MONGOSH
> db.products.find({}, {product_name: 1, product_material: 1, _id:0})
< [
  {
    product_name: 'Intelligent Fresh Chips',
    product_material: 'Concrete'
  },
  {
    product_name: 'Practical Fresh Sausages',
    product_material: 'Cotton'
  },
  {
    product_name: 'Refined Steel Car',
    product_material: 'Rubber'
  },
  {
    product_name: 'Gorgeous Plastic Pants',
    product_material: 'Soft'
  }
]
```

```
>_MONGOSH
[
  {
    product_name: 'Sleek Cotton Chair',
    product_material: 'Fresh'
  },
  {
    product_name: 'Awesome Wooden Towels',
    product_material: 'Plastic'
  },
  {
    product_name: 'Practical Soft Shoes',
    product_material: 'Rubber'
  },
  {
    product_name: 'Incredible Steel Hat',
    product_material: 'Rubber'
  },
  {
    product_name: 'Awesome Wooden Ball',
    product_material: 'Soft'
  }
]
```

>_MONGOSH

```
{
  product_name: 'Generic Wooden Pizza',
  product_material: 'Frozen'
}
{
  product_name: 'Unbranded Wooden Cheese',
  product_material: 'Soft'
}
{
  product_name: 'Unbranded Plastic Salad',
  product_material: 'Wooden'
}
{
  product_name: 'Gorgeous Cotton Keyboard',
  product_material: 'Concrete'
}
{
  product_name: 'Incredible Steel Shirt',
  product_material: 'Metal'
}
```

>_MONGOSH

```
{
  product_name: 'Ergonomic Cotton Hat',
  product_material: 'Rubber'
}
{
  product_name: 'Small Soft Chair',
  product_material: 'Cotton'
}
{
  product_name: 'Incredible Metal Car',
  product_material: 'Fresh'
}
{
  product_name: 'Licensed Plastic Bacon',
  product_material: 'Steel'
}
{
  product_name: 'Intelligent Cotton Chips',
  product_material: 'Soft'
}
```

>_MONGOSH

```
{
  product_name: 'Handcrafted Wooden Bacon',
  product_material: 'Concrete'
}
Type "it" for more
> it
< {
  product_name: 'Unbranded Granite Chicken',
  product_material: 'Metal'
}
{
  product_name: 'Ergonomic Soft Hat',
  product_material: 'Rubber'
}
```

```
{
  product_name: 'Intelligent Steel Pizza',
  product_material: 'Cotton'
}
{
  product_name: 'Tasty Rubber Cheese',
  product_material: 'Frozen'
}
{
  product_name: 'Licensed Steel Car',
  product_material: 'Cotton'
}
```

Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>

8. Find all products which contain the value of soft in product material.

```
db.products.find( { product_material: { $regex: /soft/i/ } })
```

```
> MONGOSH
> db.products.find({ product_material: { $regex: /soft/i/ } })
< {
  _id: ObjectId('6677d6edfc4777ec4d66f4b1'),
  id: '4',
  product_name: 'Gorgeous Plastic Pants',
  product_price: 492,
  product_material: 'Soft',
  product_color: 'plum'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b6'),
  id: '9',
  product_name: 'Awesome Wooden Ball',
  product_price: 28,
  product_material: 'Soft',
  product_color: 'azure'
}

{
  _id: ObjectId('6677d6edfc4777ec4d66f4b8'),
  id: '11',
  product_name: 'Unbranded Wooden Cheese',
  product_price: 26,
  product_material: 'Soft',
  product_color: 'black'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4c0'),
  id: '19',
  product_name: 'Intelligent Cotton Chips',
  product_price: 46,
  product_material: 'Soft',
  product_color: 'azure'
}
Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>
```

9. Find products which contain product color indigo and product price 492.00.

```
db.products.find( {$and: [ {product_color: 'indigo'}, { product_price: '492.00'} ] } )
```

```
> db.products.find( {$and: [{product_color: 'indigo'}, {product_price: '492.00'}]} )
<
Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>
```

No products are matched for this query.

10. Delete the products which product price value are 28.

```
db.products.deleteOne( {product_price: 28 } )
```

```
> db.products.deleteOne({ product_price: 28 })
< {
  acknowledged: true,
  deletedCount: 1
}
Atlas atlas-106h1q-shard-0 [primary] Task_01_MongoDB>
```

Here, the product_price: 28 with ID 9 has been deleted from the product JSON.

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b6'),
  id: '9',
  product_name: 'Awesome Wooden Ball',
  product_price: 28,
  product_material: 'Soft',
  product_color: 'azure'
}
```

```
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b5'),
  id: '8',
  product_name: 'Incredible Steel Hat',
  product_price: 78,
  product_material: 'Rubber',
  product_color: 'violet'
}
{
  _id: ObjectId('6677d6edfc4777ec4d66f4b7'),
  id: '10',
  product_name: 'Generic Wooden Pizza',
  product_price: 84,
  product_material: 'Frozen',
  product_color: 'indigo'
}
```

Here, ID 9, which has product_price: 28, has been deleted from the product JSON.