

```
> db.products.find(
  { price: { $eq: 699, $exists: true } },
  { name: 1, price: 1, _id: 0 }
);
```

```
< {
  name: 'SmartPad',
  price: 699
}
```

```
> db.products.find(
  {
    price: 899,
    color: {
      $in: ["white", "black"]
    }
  },
  {
    name: 1,
    price: 1,
    color: 1,
    _id: 0
  }
);
```

```
< {
  name: 'xTablet',
  price: 899,
  color: [
    'white',
    'black',
    'purple'
  ]
}
```

```
> db.products.find({
  $or: [
    { "price": { $lte: 700 } },
    { "price": { $gte: 800 } }
  ]
})
< {
  _id: 2,
  name: 'xTablet',
  price: 899,
  releaseDate: 2011-09-01T00:00:00.000Z,
  spec: {
    ram: 16,
    screen: 9.5,
    cpu: 3.66
  },
  color: [
    'white',
    'black',
    'purple'
  ],
  storage: [
    128,
    256,
    512
  ]
}
```

```
}
> db.products.find(
  {
    $and: [
      { "spec.ram": { $gt: 4 } },
      { color: { $in: [/^b/] } }
    ]
  },
  {
    name: 1,
    "spec.ram": 1,
    color: 1,
    _id: 0
  }
);
< {
  name: 'xTablet',
  spec: {
    ram: 16
  },
  color: [
    'white',
    'black',
    'purple'
  ]
}
{
  name: 'SmartTablet',
  spec: {
    ram: 12
  },
  color: [
    'blue'
  ]
}
```



```
}
> db.products.find(
  { price: { $not: { $gt: 699 } } },
  { name: 1, price: 1, _id: 0 }
);
< {
  name: 'SmartPad',
  price: 699
}
{
  name: 'SmartPhone',
  price: 599
}
> db.products.find(
  { price: { $not: { $gt: 699 } } },
  { name: 1, price: 1, _id: 0 }
);
< {
  name: 'SmartPad',
  price: 699
}
{
  name: 'SmartPhone',
  price: 599
}
> db.products.find(
  { name: { $not: /smart/i } },
  { name: 1, _id: 0 }
);
< {
  name: 'xPhone'
}
{
  name: 'xTablet'
}
```

```

}
> db.products.find({$nor : [{price : {$eq : 899}},{color : {$eq : "gold"}}]}, {name : 1, price : 1, color : 1})
< {
  _id: 1,
  name: 'xPhone',
  price: 799,
  color: [
    'white',
    'black'
  ]
}
> db.products.find(
  $nor: [
    { price: { $lt: 700 } },
    { "spec.cpu": { $gt: 3.0 } }
  ], {
    name: 1,
    price: 1,
    "spec.cpu": 1
  })
< {
  _id: 1,
  name: 'xPhone',
  price: 799,
  spec: {
    cpu: 2.66
  }
}

```

```
> db.products.find(
  { price: { $exists: true } },
  { name: 1, price: 1, _id: 0 }
);
```

```
< {
  name: 'xPhone',
  price: 799
}
{
  name: 'xTablet',
  price: 899
}
{
  name: 'SmartTablet',
  price: 899
}
{
  name: 'SmartPad',
  price: 699
}
{
  name: 'SmartPhone',
  price: 599
}
```

```
> db.products.find(
  { price: { $type: "number" } },
  { name: 1, price: 1, _id: 0 }
);
```

```
< {
  name: 'xPhone',
  price: 799
}
{
  name: 'xTablet',
  price: 899
}
{
  name: 'SmartTablet',
  price: 899
}
{
  name: 'SmartPad',
  price: 699
}
{
  name: 'SmartPhone',
  price: 599
}
```

```
> db.products.find(
  { name: { $type: "string" } },
  { name: 1, _id: 0 }
);
```

```
< {
  name: 'xPhone'
}
{
```



```
}
> db.products.find(
  { releaseDate: { $type: "date" } },
  { name: 1, releaseDate: 1, _id: 0 }
);
< {
  name: 'xPhone',
  releaseDate: 2011-05-14T00:00:00.000Z
}
{
  name: 'xTablet',
  releaseDate: 2011-09-01T00:00:00.000Z
}
{
  name: 'SmartTablet',
  releaseDate: 2015-01-14T00:00:00.000Z
}
{
  name: 'SmartPad',
  releaseDate: 2020-05-14T00:00:00.000Z
}
{
  name: 'SmartPhone',
  releaseDate: 2022-09-14T00:00:00.000Z
}
> db.products.find(
  { price: { $type: "number" } },
  { name: 1, price: 1, _id: 0 }
);
< {
  name: 'xPhone',
  price: 799
```

```
}
> db.products.find(
  { price: { $type: [1, 2] } },
  { name: 1, price: 1 }
);
< {
  _id: 1,
  name: 'xPhone',
  price: '799'
}
{
  _id: 5,
  name: 'SmartPhone',
  price: [
    '599',
    699
  ]
}
> db.products.find({$and:[{price:{$exists:true}},{price:{$lt:1600}}]},{name:1})
< {
  _id: 2,
  name: 'xTablet'
}
{
  _id: 3,
  name: 'SmartTablet'
}
{
  _id: 4,
  name: 'SmartPad'
}
{
  _id: 5,
  name: 'SmartPhone'
}
```

```
> db.products.find({  
  price: { $exists: true, $type: "array", $gt: 600}},  
  {name: 1, price: 1, _id: 0})
```

```
< {  
  name: 'SmartPad',  
  price: [  
    599,  
    699,  
    799  
  ]  
}  
  
{  
  name: 'SmartPhone',  
  price: [  
    '599',  
    699  
  ]  
}
```

```
> db.products.drop();
```

```
< true
```

```
> db.products.find(
  {
    $expr: {
      $gt: [ { $size: "$color" }, 2 ]
    }
  },
  { name: 1, color: 1, _id: 0 }
);
```

```
< {
  name: 'xTablet',
  color: [
    'white',
    'black',
    'purple'
  ]
}
{
  name: 'SmartPad',
  color: [
    'white',
    'orange',
    'gold',
    'gray'
  ]
}
{
  name: 'SmartPhone',
  color: [
    'white',
    'orange',
    'gold',
    'gray'
  ]
}
```