

CRUD Homework Solutions

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This document provides solutions to all the tasks.

Warning: This documents does not include explanation.

Task 1

Task

Count all the people who are named Pauline Fournier.

Solution

Query

```
db.people.find({
  firstName: 'Pauline',
  lastName: 'Fournier'
}).count()
```

Result

67

Task 2

Task

Count all the people who are named Pauline Fournier and were born before 01.01.1970.

Solution

Query

```
db.people.find({
  firstName: 'Pauline',
  lastName: 'Fournier',
  birthDate: {
    $lt: new ISODate('1970-01-01T00:00:00.000')
  }
}).count()
```

Result

9

Task 3

Task

Count all the people who are named:

- *Lucas Dubois*
- *Camille Dubois*

Solution

Query

```
db.people.find({
  firstName: {
    $in: ['Lucas', 'Camille']
  },
  lastName: 'Dubois'
}).count()
```

Result

471

Task 4

Task

Count all the people who have no credits.

Solution

Query

```
db.people.find({
  $or: [
    {'wealth.credits': {'$size': 0}},
    {'wealth.credits': null}
  ]
}).count()
```

Result

83089

Task 5

Task

Count all the people who have spent exactly 12.99 in the cinema.

Solution

Query

```
db.people.find({
  payments: {
    category: 'relax',
    name: 'cinema',
    amount: 12.99
  }
}).count()
```

or

```
db.people.find({
  payments: {
    $elemMatch: {
      category: 'relax',
      name: 'cinema',
      amount: 12.99
    }
  }
}).count()
```

Result

270

Task 6

Task

Count all the people, who have made a payment of 12.99 in the cinema, as the first.

Solution

Query

```
db.people.find({
  'payments.0': {
    category: 'relax',
    name: 'cinema',
    amount: 12.99
  }
}).count()
```

Result

24

Task 7

Task

Count all the people who have not been to the cinema yet.

Solution

Query

```
db.people.find({
  payments: {
    $not: {
      $elemMatch: {
        category: 'relax',
        name: 'cinema'
      }
    }
  }
}).count()
```

Result

79996

Task 8

Task

Count all the women who spent more than 100 on shoes, and more than 50 on pants.

Solution

Query

```
db.people.find({
  sex: 'female',
  payments: {
    $all: [
      {
        $elemMatch: {
          category: 'clothes',
          name: 'shoes',
          amount: { $gt: 100 }
        }
      },
      {
        $elemMatch: {
          category: 'clothes',
          name: 'pants',
          amount: { $gt: 50 }
        }
      }
    ]
  }
}).count()
```

Result

913

Task 9

Task

Count all the people from Warsaw, Poland who have been to the cinema but have not been to the disco yet.

Solution

Query

```
db.people.find({
  $and: [
    {
      'address.country': 'Poland'
    },
    {
      'address.city': 'Warsaw'
    },
    {
      payments: {
        $elemMatch: {
          category: 'relax',
          name: 'cinema'
        }
      }
    },
    {
      payments: {
        $not: {
          $elemMatch: {
            category: 'relax',
            name: 'disco'
          }
        }
      }
    }
  ]
}).count()
```

Result

13352

Task 10

Task

Count all the women from Paris and the men from Cracow, who have all of the following properties:

- flat
- house
- land

At least one of them has to cost more than 2 000 000, and none of them less than 500 000.

Solution

Query

```
db.people.find({
  $or: [
    {sex: 'female', 'address.city': 'Paris'},
    {sex: 'male', 'address.city': 'Cracow'}
  ],
  'wealth.realEstates.type': {
    $all: ['flat', 'house', 'land']
  },
  $and: [
    {'wealth.realEstates.worth': {$gt: 2000000}},
    {'wealth.realEstates.worth': {$not: {$lt: 500000}}}
  ]
}).count()
```

Result

23