Main class: General Tech

recEqJx5EYkUH6L2D

Описание задания.

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1 уровень сложности:
В рамках БД "bank" напишите следующие запросы:

(1) вывести размеры EURO-транзакций из ЕВРОПЫ в долларах

```
db.transactions.aggregate([
        {
                $match: {
                        currency: 'eur',
                }
        },

        {
                $lookup: {
                        from: 'users',
                        localField: 'sender_id',
                        foreignField: 'id',
                        as: 'sender',
                }
        },
        {
                $match: {
                        'sender.is_europe': true,
                }
        },
        {
                $project: {
                _id: 0,
                amount_usd: {$multiply:[$amount, 1.05] }
                }

        },
])
```

(2) вывести количество USD-транзакций из 'China'

```
db.transactions.aggregate([
        {
                $match: {
                        currency: 'usd',
                },

        {
                $lookup: {
                        from: 'users',
                        localField: 'sender_id',
                        foreignField: 'id',
                        as: 'sender',
                }
        },
        {
                $match: {
```

```
                                'sender.country': 'China'
                }
        },
                {
                $count: 'total_chinese_transactions'
                }
])
```

(3) вывести три самых больших транзакции в 'usd'

```
db.transactions.aggregate([
        {
                $match: {
                        currency: 'usd'
                }
         },
        {
                $sort: {
                        amount: -1 }
        },
        {
                $limit: 3
        }
])
```

**(4) вывести всех незаблокированных пользователей, у которых есть
   завершенные (is_completed) транзакции от 10 usd**

```
db.users.aggregate([
        {
                $match: {
                        is_blocked: {$ne: true }
                }
        },

        {
                $lookup: {
                        from: 'transactions',
                        localField: 'id',
                        foreignField: 'sender_id',
                        as: 'sended_transaction',
                }
        },
        {
                $lookup: {
                        from: 'transactions',
                        localField: 'id',
                        foreignField: 'recipient_id',
                        as: 'received_transaction',
                }
        },

        {
                $match: {
                        $or: [
                        {'sended_transaction.is_completed': true,
```

```
                              'sended_transaction.amount': { $gte: 10 },
                              'sended_transaction.currency': 'usd'},

                              {'received _transaction.is_completed': true,
                              'received _transaction.amount': { $gte: 10 },
                              'received _transaction.currency': 'usd'}

                              ]
                    }
          }
])
```

(5) **найти пользователей без транзакций**

```
db.users.aggregate([
          {
                    $lookup: {
                              from: 'transactions',
                              localField: 'id',
                              foreignField: 'sender_id',
                              as: 'sended_transaction',
                    }
          },
          {
                    $lookup: {
                              from: 'transactions',
                              localField: 'id',
                              foreignField: 'recipient_id',
                              as: 'received_transaction',
                    }
          },

          {
                    $match: {
                              'sended_transaction': [],
                              'received_transaction': []
                                        Или:
                              'sended_transaction': {$size:0},
                              'received_transaction': {$size:0}
                    }
          },
          {
                    $project: {
                              'sended_transaction': 0,
                              'received_transaction':0
                    }

          }

])
```

Конспект занятия

https://western-appeal-39b.notion.site/GenTech-Mar-9-2023-
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