MONGO ADVANCED QUERIES

NOMBRE: Cristian Torres Ortega
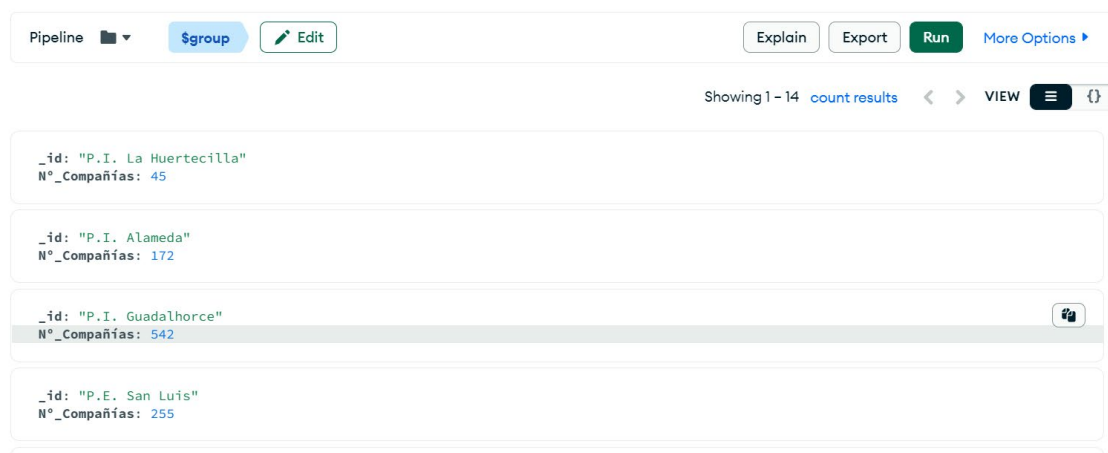
1. [2 puntos] Find the number of companies in each park

PIPLINE:

RESULT:

2. [2 puntos] Split the phones that contain "-" to have the phones as separated values, and then eliminate any space in the numbers. Calculate at the end of the pipeline how many companies does have a phone with a different structure (containing other charecters, or more than 9 numbers)

PIPLINE:

$match

```
1 ▾ {
2 ▾   telefono: {
3         $exists: true,
4       },
5   }
```

$project

```
1 ▾ {
2 ▾   telefono: {
3         $split: ["$telefono", "-"],
4       },
5   }
```

$unwind

```
1 ▾ {
2       path: "$telefono",
3   }
```

$project

```
1 ▾ {
2 ▾   telefono: {
3 ▾     $replaceAll: {
4         input: "$telefono",
5         find: " ",
6         replacement: "",
7       },
8     },
9 }
```

$match

```
1 ▾ {
2 ▾   telefono: {
3 ▾     $not: {
4         $regex: /^\d{9}$/,
5       },
6     },
7 }
```

$group

```
1 ▾ {
2     _id: "$_id",
3 }
```

```
  ∨   $count         ▾  ⬤              🗑   +

  1    "N° Compañías"
```
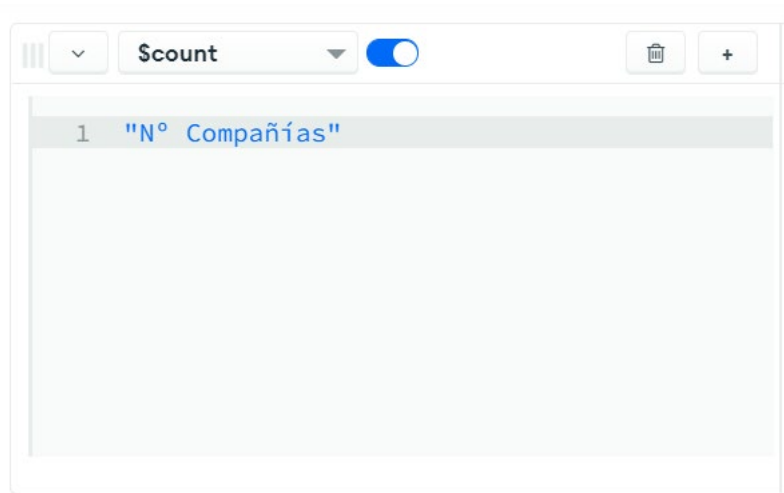
RESULT:

Output after **$count** ↗ stage (Sample of 1 document)

```
N° Compañías: 25
```

3. [2 puntos] Obtain the average number of companies in the parks

PIPELINE:

```
  ∨   $group         ▾  ⬤              🗑   +

  1 ▾ {
  2       _id: "$parque",
  3 ▾     NE: {
  4         $count: {},
  5       },
  6 }
```

$group

```
1 ▾ {
2      _id: null,
3 ▾    NumMedEmp: {
4          $avg: "$NE",
5      },
6 }
```

$project

```
1 ▾ /**
2    * specifications: The fields to
3    *   include or exclude.
4    */
5 ▾ {
6      _id : 0
7 }
```

RESULT:

Output after $project ⬚ stage (Sample of 1 document)

NumMedEmp: 146.85714285714286

4. [2 puntos] From the result of the first stages of exercise 2, split the entries so each company has a different document for each possible phone number.

PIPELINE:

$match

```
1 ▾ {
2 ▾   telefono: {
3         $exists: true,
4     },
5  }
```

$project

```
1 ▾ {
2 ▾   telefono: {
3         $split: ["$telefono", "-"],
4     },
5  }
```

$unwind

```
1 ▾ {
2     path: "$telefono",
3  }
```

```
1 ▾ {
2 ▾   telefono: {
3 ▾     $replaceAll: {
4         input: "$telefono",
5         find: " ",
6         replacement: "",
7       },
8     },
9 }
```

```
1 ▾ {
2 ▾   telefono: {
3       $split: ["$telefono", "/"],
4     },
5 }
```

```
1 ▾ {
2     path: "$telefono",
3 }
```

RESULT:

Pipeline 📁 ▾ $match › $project › $unwind › $project +2   ✏ Edit   Explain   Export   Run   More Options ▸

Showing 1 – 20 of 2521   ‹ ›   VIEW ≡ {}

_id: ObjectId('639caf64fa35a7e61b77feb1')
telefono: "951432048"

_id: ObjectId('639caf64fa35a7e61b77feb1')
telefono: "638222142"

_id: ObjectId('639caf64fa35a7e61b77feb2')
telefono: "952357617"

_id: ObjectId('639caf64fa35a7e61b77feb3')
telefono: "952349495"
```

5. [2 puntos] Are there any phone that is the same for different companies? Use a
   pipeline to calculate it.

The answer is yes, there are.

PIPLINE:

```
$match

1 ▾ {
2 ▾     telefono: {
3           $exists: true,
4       },
5   }
```

```
$project

1 ▾ {
2 ▾     telefono: {
3           $split: ["$telefono", "-"],
4       },
5   }
```

```
$unwind

1 ▾ {
2       path: "$telefono",
3   }
```

```
$project  ▼  ⬤

1 ▾ {
2 ▾   telefono: {
3 ▾     $replaceAll: {
4         input: "$telefono",
5         find: " ",
6         replacement: "",
7       },
8     },
9   }
```

```
$project  ▼  ⬤

1 ▾ {
2 ▾   telefono: {
3 ▾     $replaceAll: {
4         input: "$telefono",
5         find: ".",
6         replacement: "",
7       },
8     },
9   }
```

```
$project  ▼  ⬤

1 ▾ {
2 ▾   telefono: {
3       $split: ["$telefono", "/"],
4     },
5   }
```

```
$unwind  ▼  ⬤

1 ▾ {
2     path: "$telefono",
3   }
```

```
1 ▾ {
2     _id: "$telefono",
3 ▾   Count: {
4         $count: {},
5     },
6   }
```

```
1 ▾ {
2 ▾   Count: {
3         $gte: 2,
4     },
5   }
```

RESULT:

Pipeline 📁 ▾ | $match | $project | $unwind | $project | +5 | ✏ Edit | Explain | Export | Run | More Options ▸

Showing 1 – 20 of 55   ‹ ›   VIEW ☰ {}

_id: "952179404"
Count: 2

_id: "952038967"
Count: 2

_id: "952317789"
Count: 2

_id: "952038989"
Count: 2