

# Week 4 Response

## Querying Google Play apps

I wrote 5 queries concerning Google Play apps:

- 1) Find all entries of Category art and design, with  $\geq 4$  rating, and has  $\geq 10000$  reviews, then output name of app

```
// #1: Query all entries of Category art and design, with  $\geq 4$  rating, and has  $\geq 10000$  reviews, then output name of app
let numResults = await GooglePlayAppModel.countDocuments({Category:"ART_AND_DESIGN", Rating: { $gte: 4 }, Reviews: { $gte: 10000}});
console.log(numResults);
GooglePlayAppModel.find({Category:"ART_AND_DESIGN", Rating: { $gte: 4 }, Reviews: { $gte: 10000}}, "App").then((result) => {
  console.log(result);
})
```

- 2) Find all Beauty category apps with  $\geq 4$  rating and has  $\geq 1000$  reviews

```
// #2: Find all Beauty category apps with  $\geq 4$  rating and has  $\geq 1000$  reviews
let numResults = await GooglePlayAppModel.countDocuments({Category:"BEAUTY", Rating: { $gte: 4 }, Reviews: { $gte: 1000}});
console.log(numResults);
GooglePlayAppModel.find({Category:"BEAUTY", Rating: { $gte: 4 }, Reviews: { $gte: 1000}}).then((result) => {
  console.log(result);
})
```

- 3) Find apps with review less than 1 star, and has at least 1000 reviews

```
// #3: Find apps with review less than 1 star, and has at least 1000 reviews
let numResults = await GooglePlayAppModel.countDocuments({Rating: { $lte: 1 }, Reviews: { $gte: 1000}});
console.log(numResults);
GooglePlayAppModel.find({Rating: { $lte: 1 }, Reviews: { $gte: 1000}}).then((result) => {
  console.log(result);
})
```

- 4) Books and reference apps with at least 4 stars and at least 10000 reviews, and output app name

```
// #4: Books and reference apps with at least 4 stars and at least 10000 reviews, and output app name
let numResults = await GooglePlayAppModel.countDocuments({Category:"BOOKS_AND_REFERENCE", Rating: { $gte: 4 }, Reviews: { $gte: 10000}});
console.log(numResults);
GooglePlayAppModel.find({Category:"BOOKS_AND_REFERENCE", Rating: { $gte: 4 }, Reviews: { $gte: 10000}}, "App").then((result) => {
  console.log(result);
})
```

- 5) Find apps with 5 stars, and has at least 50 reviews

```
// #5: Find apps with 5 stars, and has at least 50 reviews
let numResults = await GooglePlayAppModel.countDocuments({Rating: { $gte: 5 }, Reviews: { $gte: 50}});
console.log(numResults);
GooglePlayAppModel.find({Rating: { $gte: 5 }, Reviews: { $gte: 50}}).then((result) => {
  console.log(result);
})
```

---

I inserted the results below:

- 1) Find all entries of Category art and design, with  $\geq 4$  rating, and has  $\geq 10000$  reviews, then output name of app
- There were 13 results.
  - I'm interested by the range of these different apps: drawing, painting, writing on photos, coloring, animation.

```
{
  _id: new ObjectId("6338b12997e0f5c51b151402"),
  App: 'U Launcher Lite - FREE Live Cool Themes, Hide Apps'
},
{
  _id: new ObjectId("6338b12997e0f5c51b151403"),
  App: 'Sketch - Draw & Paint'
},
{
  _id: new ObjectId("6338b12997e0f5c51b151407"),
  App: 'Infinite Painter'
},
{
  _id: new ObjectId("6338b12997e0f5c51b151408"),
  App: 'Garden Coloring Book'
},
{
  _id: new ObjectId("6338b12997e0f5c51b15140a"),
  App: 'Text on Photo - Fontee'
},
{
  _id: new ObjectId("6338b12997e0f5c51b15140c"),
  App: 'Tattoo Name On My Photo Editor'
},
{
  _id: new ObjectId("6338b12997e0f5c51b151412"),
  App: 'FlipaClip - Cartoon animation'
},
{
  _id: new ObjectId("6338b12997e0f5c51b151413"),
  App: 'ibis Paint X'
},
{
  _id: new ObjectId("6338b12997e0f5c51b15141a"),
  App: 'Colorfit - Drawing & Coloring'
},
{
  _id: new ObjectId("6338b12997e0f5c51b151425"),
  App: 'Floor Plan Creator'
},
{
  _id: new ObjectId("6338b12997e0f5c51b15142a"),
  App: 'Textgram - write on photos'
},
{
  _id: new ObjectId("6338b12997e0f5c51b15142d"),
  App: 'Canva: Poster, banner, card maker & graphic design'
},
{
  _id: new ObjectId("6338b12a97e0f5c51b152491"),
  App: 'Textgram - write on photos'
}
}
```

2) Find all Beauty category apps with  $\geq 4$  rating and has  $\geq 1000$  reviews

- There were 14 results.
- The app with the highest number of reviews (113,715) and the most installs (10,000,000+) is Beauty Camera - Selfie Camera.

```
{
  _id: new ObjectId("6338b12997e0f5c51b151475"),
  App: 'Beauty Camera - Selfie Camera',
  Category: 'BEAUTY',
  Rating: 4,
  Reviews: 113715,
  Size: 'Varies with device',
  Installs: '10,000,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Beauty',
  LastUpdated: 2017-08-03T04:00:00.000Z,
  CurrentVer: 'Varies with device',
  AndroidVer: 'Varies with device'
},
```

3) Find apps with review less than 1 star, and has at least 1000 reviews

- 2 apps are doing poorly.

```

{
  _id: new ObjectId("6338b12a97e0f5c51b152728"),
  App: 'Smart-AC Universal Remote Free',
  Category: 'FAMILY',
  Rating: 1,
  Reviews: 3270,
  Size: '1.8M',
  Installs: '500,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Entertainment',
  LastUpdated: 2015-08-18T04:00:00.000Z,
  CurrentVer: '1',
  AndroidVer: '2.2 and up'
},
{
  _id: new ObjectId("6338b12b97e0f5c51b1537d8"),
  App: 'EB Mobile',
  Category: 'FAMILY',
  Rating: 1,
  Reviews: 1172,
  Size: '5.6M',
  Installs: '10,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Education',
  LastUpdated: 2017-10-09T04:00:00.000Z,
  CurrentVer: '1.1.2',
  AndroidVer: '4.1 and up'
}

```

- 4) Books and reference apps with at least 4 stars and at least 10000 reviews, and output app name
  - 62 results
  - Mostly religious texts, dictionaries, or English translators for other languages
  - Screenshot of sample of results:

```

{
  _id: new ObjectId("6338b12997e0f5c51b1514a4"),
  App: 'Ebook Reader'
},
{
  _id: new ObjectId("6338b12997e0f5c51b1514a6"),
  App: 'Read books online'
},
{
  _id: new ObjectId("6338b12997e0f5c51b1514a8"),
  App: 'eBoox: book reader fb2 epub zip'
},
{
  _id: new ObjectId("6338b12997e0f5c51b1514a9"),
  App: 'English Persian Dictionary'
},
{
  _id: new ObjectId("6338b12997e0f5c51b1514ac"), App: 'Ancestry' },
{
  _id: new ObjectId("6338b12997e0f5c51b1514b3"),
  App: 'Moon+ Reader'
},
{
  _id: new ObjectId("6338b12997e0f5c51b1514b6"),
  App: 'Golden Dictionary (EN-AR)'
},
{
  _id: new ObjectId("6338b12997e0f5c51b1514b7"),
  App: 'All Language Translator Free'
},
{
  _id: new ObjectId("6338b12997e0f5c51b1514ba"),
  App: 'English Dictionary - Offline'
},
{
  _id: new ObjectId("6338b12a97e0f5c51b152365"), App: 'Bible' },
{
  _id: new ObjectId("6338b12a97e0f5c51b1523f3"),
  App: 'Amazon Kindle'
},
{
  _id: new ObjectId("6338b12a97e0f5c51b1523ff"),
  App: 'Ebook Reader'
},
{
  _id: new ObjectId("6338b12a97e0f5c51b152404"),
  App: 'Aldiko Book Reader'
},
{
  _id: new ObjectId("6338b12a97e0f5c51b152554"),
  App: 'Google T/9 2018'
}

```

5) Find apps with 5 stars, and has at least 50 reviews

- 5 results
- FD calculator
- Most of these have relatively low number of reviews (about 100)
- Most have 1000+ installs

```

{
  _id: new ObjectId("6338b12a97e0f5c51b152ea7"),
  App: 'Barisal University App-BU Face',
  Category: 'FAMILY',
  Rating: 5,
  Reviews: 100,
  Size: '10M',
  Installs: '1,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Education',
  LastUpdated: 2018-05-06T04:00:00.000Z,
  CurrentVer: '3.1.1',
  AndroidVer: '4.0.3 and up'
},
{
  _id: new ObjectId("6338b12b97e0f5c51b15337a"),
  App: 'Oración CX',
  Category: 'LIFESTYLE',
  Rating: 5,
  Reviews: 103,
  Size: '3.8M',
  Installs: '5,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Lifestyle',
  LastUpdated: 2017-09-12T04:00:00.000Z,
  CurrentVer: '5.1.10',
  AndroidVer: '4.1 and up'
},
{
  _id: new ObjectId("6338b12b97e0f5c51b153918"),
  App: 'Master E.K',
  Category: 'FAMILY',
  Rating: 5,
  Reviews: 90,
  Size: 'Varies with device',
  Installs: '1,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Education',
  LastUpdated: 2017-08-11T04:00:00.000Z,
  CurrentVer: '1.5.0',
  AndroidVer: '4.4 and up'
},

```

```
},
{
  _id: new ObjectId("6338b12b97e0f5c51b153c3d"),
  App: 'FD Calculator (EMI, SIP, RD & Loan Eligibility)',
  Category: 'FINANCE',
  Rating: 5,
  Reviews: 104,
  Size: '2.3M',
  Installs: '1,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Finance',
  LastUpdated: 2018-08-07T04:00:00.000Z,
  CurrentVer: '2.1.0',
  AndroidVer: '4.1 and up'
},
{
  _id: new ObjectId("6338b12b97e0f5c51b153c75"),
  App: 'Ríos de Fe',
  Category: 'LIFESTYLE',
  Rating: 5,
  Reviews: 141,
  Size: '15M',
  Installs: '1,000+',
  Type: 'Free',
  Price: 0,
  ContentRating: 'Everyone',
  Genres: 'Lifestyle',
  LastUpdated: 2018-03-24T04:00:00.000Z,
  CurrentVer: '1.8',
  AndroidVer: '4.1 and up'
}
```