### **Mongodb - PG Made Eazy - Web Application AGGREGATIONS**

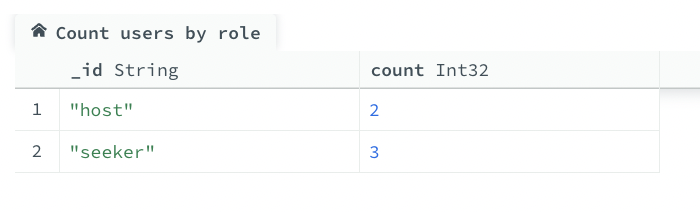
### **Users**

### **1.Count users by role**

db.users.aggregate([

{ $group: { \_id: "$role", count: { $sum: 1 } } }

])



**2.Count users by gender**

[

{

$group: {

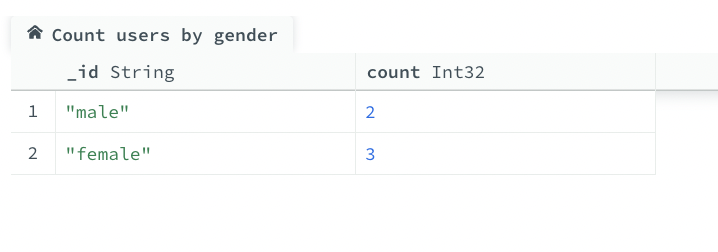
\_id: "$gender",

count: { $sum: 1 }

}

}

]

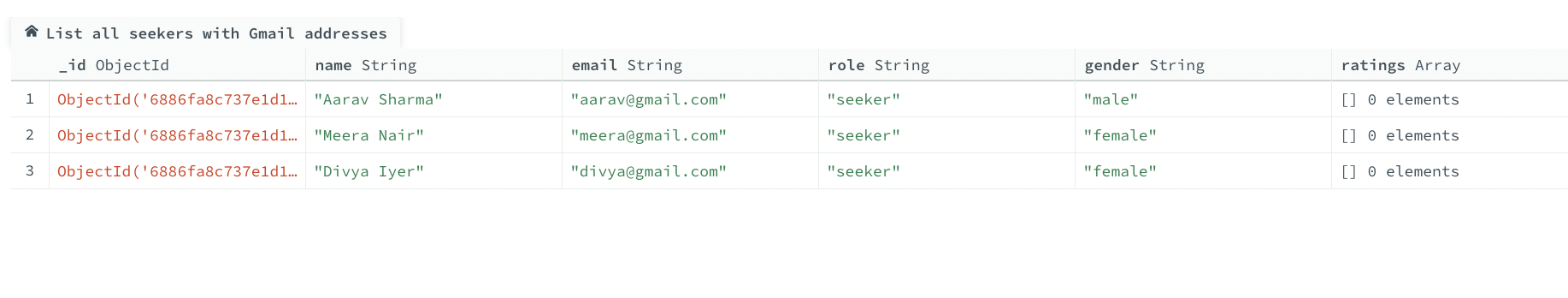


**3.List all seekers with Gmail addresses**

[

{ "$match": { "role": "seeker", "email": { "$regex": "gmail\\.com$" } } }

]



**4.Add custom field "hasRated" if user has left any ratings**

[

{

$addFields: {

hasRated: {

$cond: {

if: { $gt: [{ $size: "$ratings" }, 0] },

then: true,

else: false

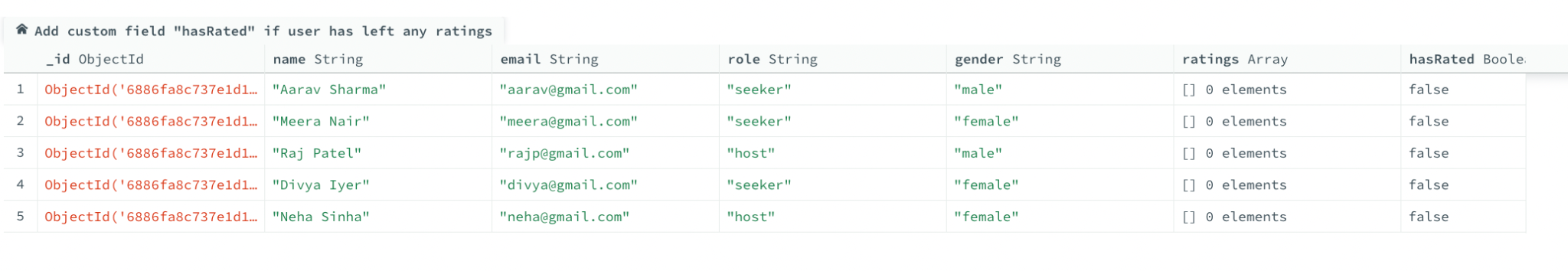
}

}

}

}

]



**5.Count seekers vs hosts ratio**

[

{

$group: {

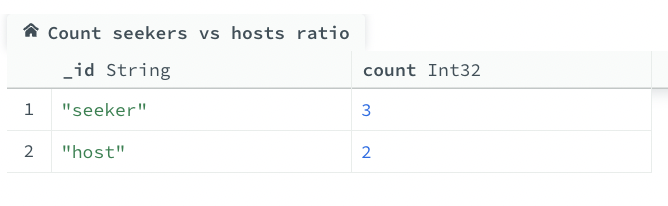
\_id: "$role",

count: { $sum: 1 }

}

}

]



### **Properties**

**1. Average price by city**

[

{

"$group": {

"\_id": "$location",

"averagePrice": { "$avg": "$price" }

}

}

]

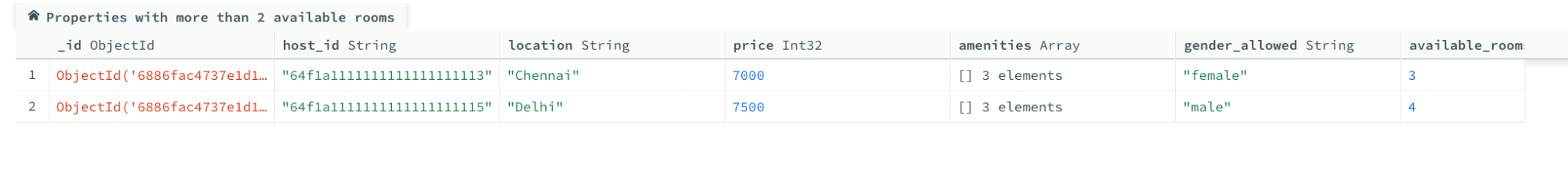


**2. Properties with more than 2 available rooms**

[

{ "$match": { "available\_rooms": { "$gt": 2 } } }

]



**3. Count properties by gender restriction**

[

{

$group: {

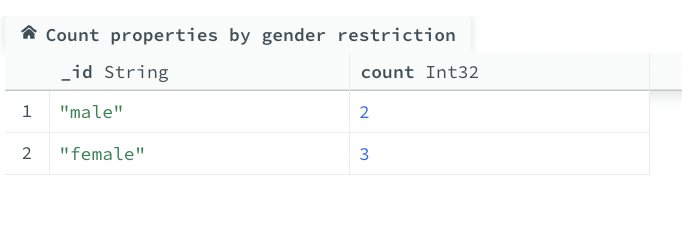
\_id: "$gender\_allowed",

count: { $sum: 1 }

}

}

]



**4. Count of properties with WiFi**

[

{"$match": {"amenities": "WiFi"}},

{"$count": "wifi\_properties\_count"}

]



**5. Average rating for each property**

[

{

$project: {

\_id: 1,

average\_rating: {

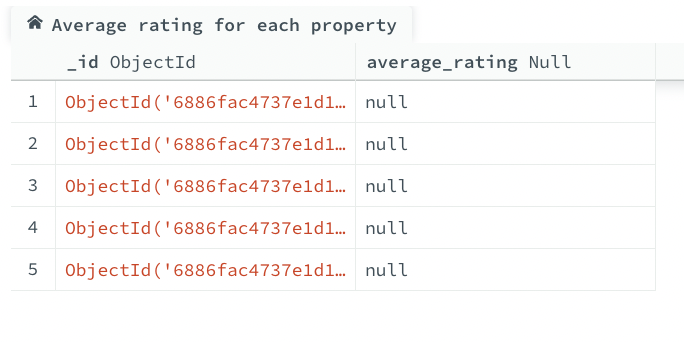
$avg: "$reviews.rating"

}

}

}

]



**Bookings**

**1. Total bookings per property**

[

{

$group: {

\_id: "$property\_id",

totalBookings: { $sum: 1 }

}

}

]



**2. Monthly revenue**

[

{

$match: {

"payment.status": "completed"

}

},

{

$addFields: {

booking\_year\_month: {

$substr: ["$booking\_date", 0, 7]

}

}

},

{

$group: {

\_id: "$booking\_year\_month",

total\_revenue: {

$sum: "$payment.amount"

}

}

},

{

$project: {

month: "$\_id",

total\_revenue: 1,

\_id: 0

}

},

{

$sort: {

month: 1

}

}

]

**3. Booking status breakdown**

[

{

$group: {

\_id: "$status",

count: { $sum: 1 }

}

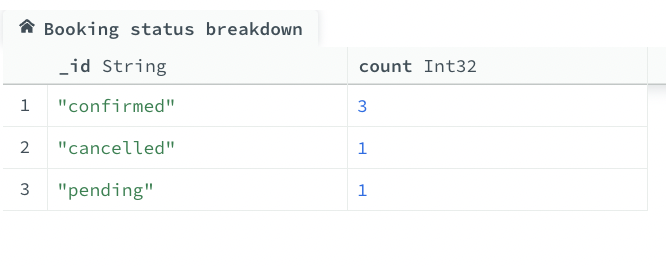
},

{

$sort: { count: -1 }

}

]



**4. Average booking amount by status**

[{ $group: { \_id: "$status", averageAmount: { $avg: "$payment.amount" } } }]

**5. User-wise total amount spent**

[

{

$group: {

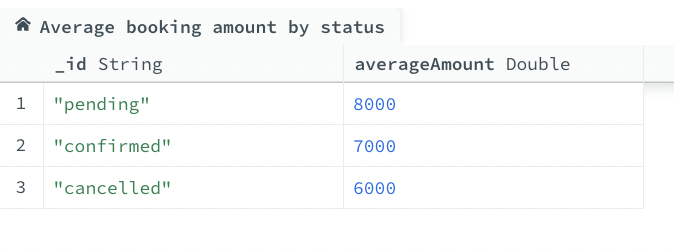
\_id: "$user\_id",

totalAmountSpent: { $sum: "$payment.amount" }

}

}

]



**Reports**

**1. Number of reports per type**

[

{

"$group": {

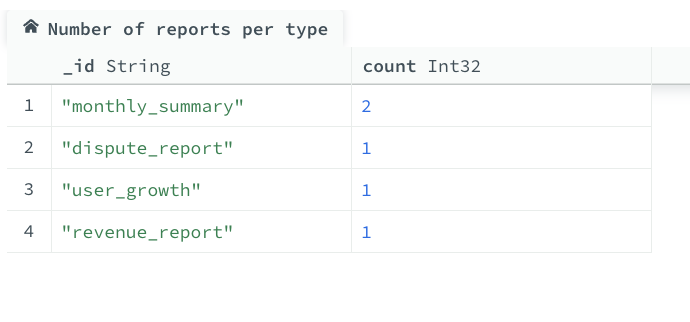
"\_id": "$report\_type",

"count": { "$sum": 1 }

}

}

]



**2. Monthly average disputes resolved**

[

{

$match: {

report\_type: "monthly"

}

},

{

$group: {

\_id: {

year: { $year: { $dateFromString: { dateString: "$generated\_on" }}},

month: { $month: { $dateFromString: { dateString: "$generated\_on" }}}

},

avg\_disputes\_resolved: { $avg: "$disputes\_resolved" }

}

}

]

**3. Highest booking count in reports**

[

{

"$sort": {

"total\_bookings": -1

}

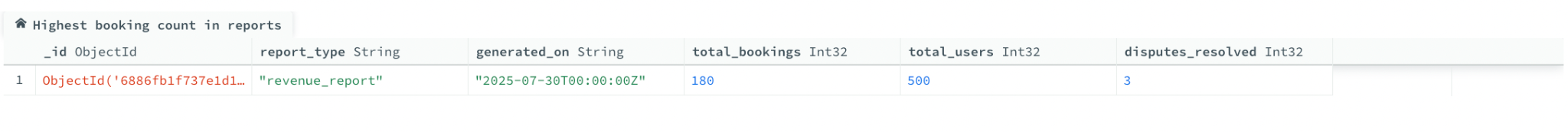
},

{

"$limit": 1

}

]



**4. Reports with more than 400 users**

[

{ $match: { total\_users: { $gt: 400 } } }

]



**5. Total disputes resolved across all reports**

[

{

$group: {

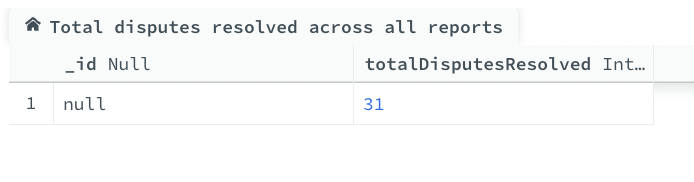
\_id: null,

totalDisputesResolved: { $sum: "$disputes\_resolved" }

}

}

]



**Reviews**

**1. Average rating per property**

[

{ $group: { \_id: "$property\_id", averageRating: { $avg: "$rating" } } }

]

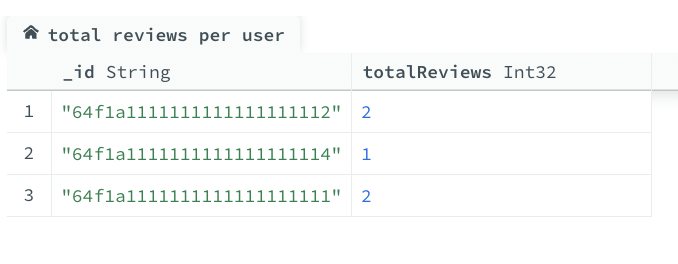


**2. Total reviews per user**

[

{ $group: { \_id: "$user\_id", totalReviews: { $sum: 1 } } }

]



**3. Count of reviews with rating < 4**

[

{

$match: { rating: { $lt: 4 } }

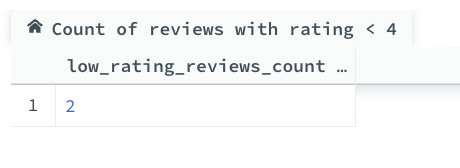
},

{

$count: "low\_rating\_reviews\_count"

}

]



**4. Most recent reviews**

[

{

"$sort": {

"created\_at": -1

}

}

]

**5. Properties with average rating ≥ 4**

[

{

"$group": {

"\_id": "$property\_id",

"averageRating": { "$avg": "$rating" }

}

},

{

"$match": {

"averageRating": { "$gte": 4 }

}

}

]

