MongoDB\_Aggregation.docx

Aggregation Queries and Views for Home Cook Meal Platform

# Orders

## Q1\_ordersByCity

Description: Total number of orders grouped by customer city.

Pipeline:  
[  
 { $lookup: { from: "users", localField: "userId", foreignField: "\_id", as: "user" } },  
 { $unwind: "$user" },  
 { $group: { \_id: "$user.address.city", totalOrders: { $sum: 1 } } }  
]

## Q2\_totalSpentPerUser

Description: Total amount spent by each user.

Pipeline:  
[  
 { $group: { \_id: "$userId", totalSpent: { $sum: "$total" } } }  
]

# Reviews

## Q3\_averageMealRatings

Description: Average rating per meal.

Pipeline:  
[  
 { $group: { \_id: "$mealId", averageRating: { $avg: "$rating" } } }  
]

# Meals

## Q4\_availableMealsByCook

Description: Count of available meals grouped by cook.

Pipeline:  
[  
 { $match: { available: true } },  
 { $group: { \_id: "$cookId", availableMeals: { $sum: 1 } } }  
]

# Payments

## Q5\_successfulPaymentsByMethod

Description: Total successful payments grouped by payment method.

Pipeline:  
[  
 { $match: { status: "Success" } },  
 { $group: { \_id: "$method", total: { $sum: "$amount" } } }  
]

# Orders

## Q6\_mostOrderedMeals

Description: Find the most frequently ordered meals by counting each mealId in all orders.

Pipeline:  
[  
 { $unwind: "$items" },  
 { $group: { \_id: "$items.mealId", count: { $sum: "$items.quantity" } } },  
 { $sort: { count: -1 } }  
]

# Reviews

## Q7\_topRatedMeals

Description: List top-rated meals with average rating >= 4.5.

Pipeline:  
[  
 { $group: { \_id: "$mealId", avgRating: { $avg: "$rating" } } },  
 { $match: { avgRating: { $gte: 4.5 } } }  
]

# Meals

## Q8\_mealCountByType

Description: Count how many meals exist for each type (e.g., Breakfast, Lunch, Dinner).

Pipeline:  
[  
 { $group: { \_id: "$type", count: { $sum: 1 } } }  
]

# Payments

## Q9\_failedPaymentsByUser

Description: List how many failed payments each user has had.

Pipeline:  
[  
 { $match: { status: "Failed" } },  
 { $group: { \_id: "$userId", failures: { $sum: 1 } } }  
]