

MONGODB AGGREGATIONS - Real-Time Quiz & Hackathon Platform

User Collections Aggregations:

1. Count users by role

\$group

```
1 ▾ [
2   {
3     $group: {
4       _id: "$role",
5       count: {
6         $sum: 1
7       }
8     }
9   }
10 ]
```

```
_id: "Participant"
count: 2
```

```
_id: "Moderator"
count: 1
```

```
_id: "Judge"
count: 1
```

```
_id: "Admin"
count: 1
```

2. Find top 2 users with the most badges

\$project

\$sort

\$limit

```
[
  { $project: { name: 1, badgeCount: { $size: "$badges" } } },
  { $sort: { badgeCount: -1 } },
  { $limit: 2 }
]
```

```
_id: ObjectId('66b1fa000000000000000004')
name: "David Green"
badgeCount: 1
```

```
_id: ObjectId('66b1fa000000000000000005')
name: "Ella White"
badgeCount: 1
```

```
_id: ObjectId('66b1fa000000000000000001')
name: "Alice Johnson"
badgeCount: 1
```

```
_id: ObjectId('66b1fa000000000000000003')
name: "Clara Brown"
badgeCount: 1
```

```
_id: ObjectId('66b1fa000000000000000002')
name: "Bob Smith"
badgeCount: 0
```

3. Count users by skill

Sunwind

\$group

\$sort

```
[
  {
    $unwind: "$profile.skills"
  },
  {
    $group: {
      _id: "$profile.skills",
      count: { $sum: 1 }
    }
  }
]
```

Q3_ Count users by skill

	_id String	count Int32
1	"Node.js"	2
2	"React"	1
3	"Python"	1
4	"UX"	1
5	"CSS"	1
6	"Management"	1
7	"MongoDB"	1
8	"HTML"	1
9	"AI"	1

4. Users created per month

\$group

\$sort

```
[{ $group: { _id: { $dateToString:
  { format: "%Y-%m", date: "$createdAt" }
},
  count: { $sum: 1 } } }]
```

Q4_Users created per month

	_id String	total Int32
1	"2025-07"	5

5. Get all users who are Judges or Moderators

\$match

\$project

```
[
  {
    $match: {
      role: { $in: ["Judge", "Moderator"] }
    }
  }
]
```

```
name : "Clara Brown"
email : "clara@example.com"
role : "Moderator"
```

```
name : "David Green"
email : "david@example.com"
role : "Judge"
```

Quizzes collection Aggregations:

1. Count quizzes by difficulty level

Sunwind Sgroup Ssort

```
[
  { $unwind: "$questions" },
  { $group: { _id: "$questions.difficulty",
    totalQuestions: { $sum: 1 } } },
  { $sort: { totalQuestions: -1 } }
]
```

Q6_Count quizzes by difficulty level

_id	String	count	Int32
1	"Easy"	5	
2	"Medium"	5	

2. Average time limit for all quizzes

Sgroup

```
[
  { $group: { _id: null, averageTimeLimit:
    { $avg: "$timeLimit" } } }
]
```

avgTimeLimit: 20

3. Top 3 quizzes with the most questions

Sproject Ssort \$limit

```
[
  { $project: { title: 1, questionCount: { $size: "$questions" }
    { $sort: { questionCount: -1 } },
    { $limit: 5 }
  }
]
```

_id: ObjectId('66b1f1b00000000000000001')
title: "JavaScript Basics"
questionCount: 2

_id: ObjectId('66b1f1b00000000000000002')
title: "HTML5 Quiz"
questionCount: 2

_id: ObjectId('66b1f1b00000000000000003')
title: "CSS Advanced"
questionCount: 2

4. Count quizzes created by each admin

Sgroup Ssort

```
[
  { $group: { _id: "$createdBy", totalQuizzes: { $sum: 1 } } },
  { $sort: { totalQuizzes: -1 } }
]
```

_id: ObjectId('66b1f1a00000000000000002')
count: 5

5. Quizzes scheduled in the future

\$match Sproject Ssort

```
[
  { $match: { startTime: { $gt: new Date() } } },
  { $project: { title: 1, startTime: 1, endTime: 1 } },
  { $sort: { startTime: 1 } }
]
```



This collection has no data

It only takes a few seconds to import data from a JSON or CSV file.

Quiz Attempts collections Aggregations:

1. Average score per quiz

\$group

```
{
  _id: "$quizId",
  averageScore: {
    $avg: "$score"
  }
}
```

```
_id: ObjectId('66b1fb000000000000000003')
averageScore : 2
```

```
_id: ObjectId('66b1fb000000000000000001')
averageScore : 2
```

```
_id: ObjectId('66b1fb000000000000000004')
averageScore : 1
```

```
_id: ObjectId('66b1fb000000000000000002')
averageScore : 1
```

```
_id: ObjectId('66b1fb000000000000000005')
averageScore : 1
```

2. Top 3 scorers in a specific quiz

\$match

\$group

\$sort

\$limit

```
[
  { "$match": { "quizId": { "$eq": "specificQuizId" } } },
  { "$group": { "_id": "$userId", "totalScore": { "$sum": "$score" } } },
  { "$sort": { "totalScore": -1 } },
  { "$limit": 5 }
]
```



This collection has no data

It only takes a few seconds to import data from a JSON or CSV file.

3. Participation count per quiz

\$group \$project \$sort

```
[
  { $group: { _id: "$quizId", participants: { $addToSet: "$userId" } } },
  { $project: { quizId: "$_id", participantCount: { $size: "$participants" } } },
  { $sort: { participantCount: -1 } }
]
```

Q13_Participation count per quiz

	_id ObjectId	quizId ObjectId	participantCount Int32
1	ObjectId('66b1f1b000000000...')	ObjectId('66b1f1b000000000...')	1
2	ObjectId('66b1f1b000000000...')	ObjectId('66b1f1b000000000...')	1
3	ObjectId('66b1f1b000000000...')	ObjectId('66b1f1b000000000...')	1
4	ObjectId('66b1f1b000000000...')	ObjectId('66b1f1b000000000...')	1
5	ObjectId('66b1f1b000000000...')	ObjectId('66b1f1b000000000...')	1

4. Average time taken per quiz

\$unwind \$group \$sort

```
[
  { $unwind: "$responses" },
  { $group: { _id: "$quizId", averageTime: { $avg: "$responses.timeTaken" } } },
  { $sort: { averageTime: -1 } }
]
```

_id: ObjectId('66b1f1b0000000000000000000000001')
averageTimeTaken : 9

_id: ObjectId('66b1f1b0000000000000000000000003')
averageTimeTaken : 10.5

_id: ObjectId('66b1f1b0000000000000000000000002')
averageTimeTaken : 6.5

_id: ObjectId('66b1f1b0000000000000000000000004')
averageTimeTaken : 12.5

_id: ObjectId('66b1f1b0000000000000000000000005')
averageTimeTaken : 6.5

5. User performance distribution

\$bucket

```
[
  {
    $group: {
      _id: "$userId",
      totalScore: { $sum: "$score" },
      averageScore: { $avg: "$score" },
      attemptCount: { $sum: 1 },
      correctAnswers: { $sum: { $size: { $filter: { input: "$responses", cond: "$$this.isCorrect" } } } },
      totalQuestions: { $sum: { $size: "$responses" } }
    },
  },
  {
    $project: {
      _id: 1,
      totalScore: 1,
      averageScore: 1,
      attemptCount: 1,
      correctRate: { $cond: { if: { $gt: ["$totalQuestions", 0] }, then: { $divide: ["$correctAnswers", "$totalQuestions"] }, else: 0 } }
    }
  }
]
```

```
_id: ObjectId('66b1fa000000000000000001')
totalScore: 4
averageScore: 2
attemptCount: 2
```

```
_id: ObjectId('66b1fa000000000000000005')
totalScore: 2
averageScore: 1
attemptCount: 2
```

```
_id: ObjectId('66b1fa000000000000000004')
totalScore: 1
averageScore: 1
attemptCount: 1
```

Hackathons collections Aggregations:

1. Count hackathons created by each organizer

\$group

```
[
  {
    $group: {
      _id: "$organizerId",
      count: { $sum: 1 }
    }
  }
]
```

```
_id: ObjectId('66b1fa000000000000000002')
hackathonsCount: 5
```

2. Average team size allowed per hackathon

\$group

```
[
  {
    $match: {
      teamsAllowed: true
    }
  },
  {
    $group: {
      _id: null,
      averageTeamSize: {
        $avg: "$teamSize"
      }
    }
  }
]
```

avgTeamSize : 4.4

3. Top 2 hackathons with the most problem statements

\$project \$sort \$limit

```
[
  {
    $project: {
      title: 1,
      problemsCount: { $size: "$problems" }
    }
  },
  {
    $sort: { problemsCount: -1 }
  },
  {
    $limit: 2
  }
]
```

Q18_Top 3 hackathons with the most problem statements													
	_id	ObjectId	title	String	description	String	problems	Array	startTime	Date	endTime	Date	organiz
1	ObjectId('66b1f2d00000000...		"AI for Good Hackathon"		"Build AI solutions for ...		[]	2 elements	2025-08-01T09:00:00.000+...		2025-08-03T18:00:00.000+...		ObjectI
2	ObjectId('66b1f2d00000000...		"Web3 DApps Challenge"		"Create decentralized ap...		[]	2 elements	2025-08-10T10:00:00.000+...		2025-08-12T20:00:00.000+...		ObjectI

4. Upcoming hackathons

\$match \$project

```
[
  {
    $match: {
      startTime: { $gt: new Date("2025-07-26T09:11:23Z") }
    }
  },
  {
    $project: {
      title: 1,
      startTime: 1,
      endTime: 1,
      organizerId: 1,
      teamSize: 1,
      teamsAllowed: 1
    }
  }
]
```

Q19_Upcoming hackathons				
	_id ObjectId	title String	startTime Date	endTime Date
1	ObjectId('66b1f2d00000000...	"AI for Good Hackathon"	2025-08-01T09:00:00.000+...	2025-08-03T18:00:00.000+...
2	ObjectId('66b1f2d00000000...	"Web3 DApps Challenge"	2025-08-10T10:00:00.000+...	2025-08-12T20:00:00.000+...
3	ObjectId('66b1f2d00000000...	"EdTech Innovation Sprin...	2025-08-15T08:30:00.000+...	2025-08-17T19:00:00.000+...
4	ObjectId('66b1f2d00000000...	"FinTech Disruption Hack...	2025-08-20T09:00:00.000+...	2025-08-22T18:00:00.000+...
5	ObjectId('66b1f2d00000000...	"GreenTech Sustainabilit...	2025-08-25T10:00:00.000+...	2025-08-27T20:00:00.000+...

5. Hackathon durations in days

\$project

```
[
  {
    $project: {
      title: 1,
      durationInDays: {
        $divide: [
          { $subtract: ["$endTime", "$startTime"] },
          86400000
        ]
      }
    }
  }
]
```

Q20_Hackathon durations in days

	_id ObjectId	title String	durationDays Double
1	ObjectId('66b1f2d000000000...')	"EdTech Innovation Sprin...	2.4375
2	ObjectId('66b1f2d000000000...')	"Web3 DApps Challenge"	2.4166666666666665
3	ObjectId('66b1f2d000000000...')	"GreenTech Sustainabilit...	2.4166666666666665
4	ObjectId('66b1f2d000000000...')	"AI for Good Hackathon"	2.375
5	ObjectId('66b1f2d000000000...')	"FinTech Disruption Hack...	2.375

Submissions collections Aggregations:

1. Average score per hackathon

\$group

```
[
  {
    "$group": {
      "_id": "$hackathonId",
      "averageScore": { "$avg": "$score" }
    }
  }
]
```

_id: ObjectId('66b1f2d0000000000000000000000003')
averageScore : 78

_id: ObjectId('66b1f2d0000000000000000000000001')
averageScore : 85

_id: ObjectId('66b1f2d0000000000000000000000004')
averageScore : 88

_id: ObjectId('66b1f2d0000000000000000000000002')
averageScore : 90

_id: ObjectId('66b1f2d0000000000000000000000005')
averageScore : 92

2. Top 3 highest-scoring submissions

\$sort

\$limit


```
[
  {
    $sort: {
      score: -1
    }
  },
  {
    $limit: 3
  }
]
```

Q22_Top 2 highest-scoring submissions

	_id ObjectId	hackathonId ObjectId	teamId ObjectId	submittedBy ObjectId	score Int32
1	ObjectId('66b1f3e0000000...	ObjectId('66b1f2d0000000...	ObjectId('66b1f4a0000000...	ObjectId('66b1f1a0000000...	92
2	ObjectId('66b1f3e0000000...	ObjectId('66b1f2d0000000...	ObjectId('66b1f4a0000000...	ObjectId('66b1f1a0000000...	90

3. Count submissions per hackathon

\$group

```
[
  {
    "$group": {
      "_id": "$hackathonId",
      "submissionCount": { "$sum": 1 }
    }
  }
]
```

Q23_Count submissions per hackathon

	_id ObjectId	totalSubmissions Int32
1	ObjectId('66b1f2d00000000...	1
2	ObjectId('66b1f2d00000000...	1
3	ObjectId('66b1f2d00000000...	1
4	ObjectId('66b1f2d00000000...	1
5	ObjectId('66b1f2d00000000...	1

4. Submissions with feedback containing the word “improve”

\$match

```
[{ $match: { feedback: { $regex: /improve/i } } }]
```

```
_id: ObjectId('66b1f3e00000000000000001')
hackathonId : ObjectId('66b1f2d00000000000000001')
teamId : ObjectId('66b1f4a00000000000000001')
score : 85
feedback : "Great approach for real-time data processing. Improve UI."
```

5. Average submission time (relative to event start)

\$lookup

\$unwind

\$project

\$group

\$project

```
[
  {
    $lookup: {
      from: "Hackathons",
      localField: "hackathonId",
      foreignField: "_id",
      as: "hackathonDetails"
    }
  },
  {
    $unwind: "$hackathonDetails"
  },
  {
    $project: {
      submissionTimeDiff: {
        $subtract: ["$submittedAt", "$hackathonDetails.startDate"]
      }
    }
  },
  {
    $group: {
      _id: null,
      averageSubmissionTime: {
        $avg: "$submissionTimeDiff"
      }
    }
  },
  {
    $project: {
      _id: 0,
      averageSubmissionTime: 1
    }
  }
]
]
```

🏠 Q25_Average submission time (relative to event start

	_id ObjectId	avgDelayHours Double
1	ObjectId('66b1f2d000000000...')	29.75
2	ObjectId('66b1f2d000000000...')	31
3	ObjectId('66b1f2d000000000...')	32.5
4	ObjectId('66b1f2d000000000...')	32.833333333333336
5	ObjectId('66b1f2d000000000...')	34.166666666666664

Team's collections Aggregations:

1. Count teams per hackathon

\$group

```
[
  {
    $group: {
      _id: "$hackathonId",
      teamCount: { $sum: 1 }
    }
  }
]
```

```
_id: ObjectId('66b1f2d0000000000000000002')
totalTeams : 1
```

```
_id: ObjectId('66b1f2d0000000000000000004')
totalTeams : 1
```

```
_id: ObjectId('66b1f2d0000000000000000005')
totalTeams : 1
```

```
_id: ObjectId('66b1f2d0000000000000000003')
totalTeams : 1
```

```
_id: ObjectId('66b1f2d0000000000000000001')
totalTeams : 1
```

2. Average team size

\$group

```
[
  {
    $group: {
      _id: null,
      averageTeamSize: { $avg: { $size: "$members" } }
    }
  }
]
```

```
_id: null
averageTeamSize : 2.8
```

3. Largest teams (Top 3)

\$project

\$sort

\$limit

```
[
  {
    $project: {
      teamName: 1,
      memberCount: { $size: "$members" }
    },
    {
      $sort: { memberCount: -1 }
    },
    {
      $limit: 3
    }
  ]
]
```

```
_id: ObjectId('66b1f4a00000000000000003')
hackathonId : ObjectId('66b1f2d00000000000000003')
teamName : "EdTech Genius"
teamSize : 5
```

```
_id: ObjectId('66b1f4a00000000000000001')
hackathonId : ObjectId('66b1f2d00000000000000001')
teamName : "Team Alpha"
teamSize : 3
```

```
_id: ObjectId('66b1f4a00000000000000002')
hackathonId : ObjectId('66b1f2d00000000000000002')
teamName : "Blockchain Bros"
teamSize : 2
```

4. Teams per hackathon with members

\$group

```
[
  {
    "$group": {
      "_id": "$hackathonId",
      "teams": {
        "$push": {
          "teamId": "$_id",
          "teamName": "$teamName",
          "members": "$members"
        }
      }
    }
  }
]
```

`_id: ObjectId('66b1f2d00000000000000003')`
`totalMembers : 5`

`_id: ObjectId('66b1f2d00000000000000001')`
`totalMembers : 3`

`_id: ObjectId('66b1f2d00000000000000004')`
`totalMembers : 2`

`_id: ObjectId('66b1f2d00000000000000002')`
`totalMembers : 2`

`_id: ObjectId('66b1f2d00000000000000005')`
`totalMembers : 2`

5. Teams created after a specific date

\$match

```
[
  {
    $match: {
      createdAt: {
        $gt: ISODate("2024-01-01")
      }
    }
  }
]
```

`_id: ObjectId('66b1f4a00000000000000004')`
`hackathonId : ObjectId('66b1f2d00000000000000004')`
`teamName : "FinTech Squad"`
`createdAt : 2025-08-01T09:45:00.000+00:00`

`_id: ObjectId('66b1f4a00000000000000005')`
`hackathonId : ObjectId('66b1f2d00000000000000005')`
`teamName : "GreenTech Crew"`
`createdAt : 2025-08-03T13:20:00.000+00:00`

Leader board collection Aggregations:

1. Top 3 users in all events (by score)

\$sort

\$group

\$project

```
[
  { "$sort": { "score": -1 } },
  { "$group": { "_id": "$eventId", "topUsers": { "$push": "$$ROOT" } } },
  { "$project": { "topUsers": { "$slice": [ "$topUsers", 3 ] } } }
]
```

Q31_Top 5 users in all events (by score)

	_id ObjectId	eventType String	eventId ObjectId	userId ObjectId	score Int32	rank Int32
1	ObjectId('66b1f5b00000000000000000')	"Hackathon"	ObjectId('66b1f2d00000000000000000')	ObjectId('66b1fa000000000000000000')	92	1
2	ObjectId('66b1f5b00000000000000000')	"Hackathon"	ObjectId('66b1f2d00000000000000000')	ObjectId('66b1fa000000000000000000')	90	2
3	ObjectId('66b1f5b00000000000000000')	"Hackathon"	ObjectId('66b1f2d00000000000000000')	ObjectId('66b1fa000000000000000000')	85	3
4	ObjectId('66b1f5b00000000000000000')	"Quiz"	ObjectId('66b1f1b00000000000000000')	ObjectId('66b1fa000000000000000000')	18	1
5	ObjectId('66b1f5b00000000000000000')	"Quiz"	ObjectId('66b1f1b00000000000000000')	ObjectId('66b1fa000000000000000000')	15	2

2. Average score per event

\$group

```
[
  {
    $group: {
      _id: "$eventId",
      averageScore: { $avg: "$score" }
    }
  }
]
```

```
_id: ObjectId('66b1f2d00000000000000005')
avgScore : 92
```

```
_id: ObjectId('66b1f2d00000000000000002')
avgScore : 90
```

```
_id: ObjectId('66b1f2d00000000000000001')
avgScore : 85
```

```
_id: ObjectId('66b1f1b00000000000000001')
avgScore : 18
```

```
_id: ObjectId('66b1f1b00000000000000002')
avgScore : 15
```

3. Count leaderboard entries by event type

\$group

```
[
  {
    $group: {
      _id: "$eventType",
      count: { $sum: 1 }
    }
  }
]
```

```
_id: "Hackathon"
totalEntries : 3
```

```
_id: "Quiz"
totalEntries : 2
```

4. Rank distribution per event

\$group \$group

```
[
  {
    "$group": {
      "_id": {
        "eventId": "$eventId",
        "rank": "$rank"
      },
      "count": {
        "$sum": 1
      }
    },
    {
      "$group": {
        "_id": "$_id.eventId",
        "rankDistribution": {
          "$push": {
            "rank": "$_id.rank",
            "count": "$count"
          }
        }
      }
    }
  }
]
```

‣ _id: Object
count : 1

‣ _id: Object
count : 1

‣ _id: Object
count : 1

‣ _id: Object
count : 1

‣ _id: Object
count : 1

5. Leaderboard for a specific event (with top 3)

\$match \$sort \$limit \$project

```
[
  {
    "$match": {
      "eventId": "<specific_event_id>"
    },
    {
      "$sort": {
        "score": -1
      }
    },
    {
      "$limit": 3
    },
    {
      "$project": {
        "_id": 0,
        "userId": 1,
        "rank": 1,
        "score": 1
      }
    }
  ]
```

userId : ObjectId('66b1fa000000000000000005')
score : 92
rank : 1

Notifications collections Aggregations:

1. Count notifications by type

\$group

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

Q36_Count notifications by type

	_id String	totalNotifications Int32
1	"Reminder"	2
2	"EventUpdate"	2
3	"LeaderboardUpdate"	1

2. Unread notifications per user

\$match \$group

```
[
  {
    "$match": {
      "isRead": false
    }
  },
  {
    "$group": {
      "_id": "$userId",
      "unreadNotificationsCount": {
        "$sum": 1
      }
    }
  }
]
```

Q37_Unread notifications per user

	_id ObjectId	unreadCount Int32
1	ObjectId('66b1fa00000000...	1
2	ObjectId('66b1fa00000000...	1
3	ObjectId('66b1fa00000000...	1

3. Most recent 3 notifications

\$sort \$limit

```
[
  { "$sort": { "createdAt": -1 } },
  { "$limit": 3 }
]
```

Q38_Most recent 10 notifications

	_id ObjectId	userId ObjectId	message String	type String	createdAt Date
1	ObjectId('66b1f6c000000000...	ObjectId('66b1fa00000000...	"You ranked #1 in the 'G...	"LeaderboardUpdate"	2025-08-28T10:00:00.000+...
2	ObjectId('66b1f6c000000000...	ObjectId('66b1fa00000000...	"Your team 'FinTech Squa...	"EventUpdate"	2025-08-21T20:15:00.000+...

4. Notifications sent in the last 3 days

\$match

```
[
  {
    "$match": {
      "createdAt": {
        "$gte": {
          "$date": "2025-07-23T10:11:40Z"
        }
      }
    }
  }
]
```

Q39_Notifications sent in the last 7 days

	_id ObjectId	userId ObjectId	message String	type String	createdAt Date
1	ObjectId('66b1f6c000000000...	ObjectId('66b1fa00000000...	"You ranked #1 in the 'G...	"LeaderboardUpdate"	2025-08-28T10:00:00.000+...
2	ObjectId('66b1f6c000000000...	ObjectId('66b1fa00000000...	"Your team 'FinTech Squa...	"EventUpdate"	2025-08-21T20:15:00.000+...
3	ObjectId('66b1f6c000000000...	ObjectId('66b1fa00000000...	"Hackathon 'EdTech Innov...	"Reminder"	2025-08-14T09:00:00.000+...
4	ObjectId('66b1f6c000000000...	ObjectId('66b1fa00000000...	"New problem statements ...	"EventUpdate"	2025-08-10T14:05:00.000+...

5. Count notifications per user per type

\$group

```
[
  {
    $group: {
      _id: { userId: "$userId", type: "$type" },
      count: { $sum: 1 }
    }
  }
]
```

Q40_Count notifications per user per type

	_id Object	count Int32
1	{ } 2 fields	1
2	{ } 2 fields	1
3	{ } 2 fields	1
4	{ } 2 fields	1
5	{ } 2 fields	1

Rewards collections Aggregations:

1. Count rewards by type

\$group

```
[
  {
    $group: {
      _id: "$rewardType",
      count: { $sum: 1 }
    }
  }
]
```

Q41_Count rewards by type

	_id String	totalRewards Int32
1	"Badge"	2
2	"Certificate"	2
3	"Monetary"	1

2. Count rewards by event type

\$group

```
[
  {
    $group: {
      _id: "$eventType",
      count: { $sum: 1 }
    }
  }
]
```

Q42_Count rewards by event type

	_id String	totalRewards Int32
1	"Hackathon"	3
2	"Quiz"	2

3. Top 3 users with the most rewards

\$group \$sort \$limit

```
[
  {
    $group: {
      _id: "$userId",
      rewardCount: { $sum: 1 }
    }
  },
  {
    $sort: { rewardCount: -1 }
  },
  {
    $limit: 3
  }
]
```


Q43_Top 3 users with the most rewards

_id	ObjectId	rewardCount	Int32
1	ObjectId('66b1fa00000000...	1	
2	ObjectId('66b1fa00000000...	1	
3	ObjectId('66b1fa00000000...	1	

4. Recently issued rewards

\$match

\$sort

```
[
  {
    "$match": {
      "issuedAt": {
        "$lte": ISODate("2025-07-26T10:16:43Z")
      }
    },
    {
      "$sort": {
        "issuedAt": -1
      }
    }
  ]
```

_id: ObjectId('66b1f7d00000000000000002')

userId : ObjectId('66b1fa000000000000000005')

eventId : ObjectId('66b1f2d00000000000000005')

rewardType : "Certificate"

rewardDetails : "Winner of GreenTech Sustainability Hackathon"

issuedAt : 2025-08-28T09:30:00.000+00:00

_id: ObjectId('66b1f7d00000000000000004')

userId : ObjectId('66b1fa000000000000000004')

eventId : ObjectId('66b1f2d00000000000000004')

rewardType : "Monetary"

rewardDetails : "\$500 Cash Prize for FinTech Disruption Hackathon"

issuedAt : 2025-08-23T12:00:00.000+00:00

5. Rewards distribution per event

\$group

```
[
  {
    "$group": {
      "_id": "$eventId",
      "totalRewards": { "$sum": 1 }
    }
  ]
```

Q45_Rewards distribution per event

_id	ObjectId	totalRewards	Int32
1	ObjectId('66b1fb00000000...	1	
2	ObjectId('66b1f2d0000000...	1	
3	ObjectId('66b1f2d0000000...	1	
4	ObjectId('66b1f2d0000000...	1	
5	ObjectId('66b1fb00000000...	1	