

PRACTICAL-04

Aggregation USING Mangodb

USING FIFA WORLDCUP DATASET

COMPARISON OPERATORS

\$gt

Team won more than one match

```
> use fifa
< switched to db fifa
> db.fifadata.find({ "wins": { "$gt": 1 } });
< {
  _id: ObjectId('65f459dec401c242d6c12691'),
  key_id: 1,
  tournament_id: 'WC-1930',
  tournament_name: '1930 FIFA World Cup',
  stage_number: 1,
  stage_name: 'group stage',
  group_name: 'Group 1',
  position: 1,
  team_id: 'T-03',
  team_name: 'Argentina',
  team_code: 'ARG',
  played: 3,
  wins: 3,
  draws: 0,
  losses: 0,
  goals_for: 10,
```

\$lt

Find the matches where goals conceded was less than 10

```
type: 'T' for more
> db.fifadata.find({ "goals_against": { "$lt": 10 } });
< {
  _id: ObjectId('65f459dec401c242d6c12691'),
  key_id: 1,
  tournament_id: 'WC-1930',
  tournament_name: '1930 FIFA World Cup',
  stage_number: 1,
  stage_name: 'group stage',
  group_name: 'Group 1',
  position: 1,
  team_id: 'T-03',
  team_name: 'Argentina',
  team_code: 'ARG',
  played: 3,
  wins: 3,
  draws: 0,
  losses: 0,
  goals_for: 10,
  goals_against: 4,
  goal_difference: 6,
  points: 6,
  advanced: 1
}
```

In- Find Matches with team codes ESP or BRA

```
> db.fifadata.find({ "team_code": { "$in": ["ESP", "BRA"] } });
< {
  _id: ObjectId('65f459dec401c242d6c12696'),
  key_id: 6,
  tournament_id: 'WC-1930',
  tournament_name: '1930 FIFA World Cup',
  stage_number: 1,
  stage_name: 'group stage',
  group_name: 'Group 2',
  position: 2,
  team_id: 'T-09',
  team_name: 'Brazil',
  team_code: 'BRA',
  played: 2,
  wins: 1,
  draws: 0,
  losses: 1,
  goals_for: 5,
  goals_against: 2,
  goal_difference: 3,
  points: 2,
  advanced: 0
}
```

LOGICAL OPERATORS

AND ---find matches where number of goals scored is greater than 5 AND the number of goals conceded is less than 5.

```
> db.fifadata.find({
  "$and": [
    { "goals_for": { "$gt": 5 } },
    { "goals_against": { "$lt": 5 } }
  ]
});
< {
  _id: ObjectId('65f459dec401c242d6c12691'),
  key_id: 1,
  tournament_id: 'WC-1930',
  tournament_name: '1930 FIFA World Cup',
  stage_number: 1,
  stage_name: 'group stage',
  group_name: 'Group 1',
  position: 1,
  team_id: 'T-03',
  team_name: 'Argentina',
  team_code: 'ARG',
  played: 3,
  wins: 3,
  draws: 0,
  losses: 0,
  goals_for: 10,
  goals_against: 4,
  goal_difference: 6,
  points: 6,
```

OR – Find the matches where either the number of wins is greater than 2 OR the number of draws is equal to 3.

```
> db.fifadata.find({
  "$or": [
    { "wins": { "$gt": 2 } },
    { "draws": { "$eq": 3 } }
  ]
});
< {
  _id: ObjectId('65f459dec401c242d6c12691'),
  key_id: 1,
  tournament_id: 'WC-1930',
  tournament_name: '1930 FIFA World Cup',
  stage_number: 1,
  stage_name: 'group stage',
  group_name: 'Group 1',
  position: 1,
  team_id: 'T-03',
  team_name: 'Argentina',
  team_code: 'ARG',
  played: 3,
  wins: 3,
  draws: 0,
  losses: 0,
  goals_for: 10,
  goals_against: 4,
  goal_difference: 6,
  points: 6,
  advanced: 1
}
```

ELEMENT OPERATORS

Exist – Matches where Goal exist

```
> db.fifadata.find({ "goals_for": { "$exists": true } });
< {
  _id: ObjectId('65f459dec401c242d6c12691'),
  key_id: 1,
  tournament_id: 'WC-1930',
  tournament_name: '1930 FIFA World Cup',
  stage_number: 1,
  stage_name: 'group stage',
  group_name: 'Group 1',
  position: 1,
  team_id: 'T-03',
  team_name: 'Argentina',
  team_code: 'ARG',
  played: 3,
  wins: 3,
  draws: 0,
  losses: 0,
  goals_for: 10,
  goals_against: 4,
  goal_difference: 6,
  points: 6,
  advanced: 1
}
```

Type-- documents where the field "position" has a numeric value.

```
> db.fifadata.find({ "position": { "$type": "number" } });  
< {  
  _id: ObjectId('65f459dec401c242d6c12691'),  
  key_id: 1,  
  tournament_id: 'WC-1930',  
  tournament_name: '1930 FIFA World Cup',  
  stage_number: 1,  
  stage_name: 'group stage',  
  group_name: 'Group 1',  
  position: 1,  
  team_id: 'T-03',  
  team_name: 'Argentina',  
  team_code: 'ARG',  
  played: 3,  
  wins: 3,  
  draws: 0,  
  losses: 0,  
  goals_for: 10,  
  goals_against: 4,  
  goal_difference: 6,  
  points: 6,  
  advanced: 1  
}
```