**PRACTICAL 04 AIM :- AGGREGATION OF MONGODB**

**CODE & OUTPUT :-**

**Comparison Query Operator**

**Working with single field**

**1) $lte** prac4> db.prac4Collection.find({fare : {"$lte":50}},{\_id:0 , name : 3 })

[{ name: 'Anderson, Mr. Harry' },

{ name: 'Andrews, Mr. Thomas Jr' },

{ name: 'Artagaveytia, Mr. Ramon' },

{ name: 'Barkworth, Mr. Algernon Henry Wilson' },

{ name: 'Baumann, Mr. John D' },

{ name: 'Behr, Mr. Karl Howell' },

{ name: 'Birnbaum, Mr. Jakob' },

{ name: 'Bjornstrom-Steffansson, Mr. Mauritz Hakan' },

{ name: 'Blackwell, Mr. Stephen Weart' },

{ name: 'Blank, Mr. Henry' },

{ name: 'Bonnell, Miss. Elizabeth' },

{ name: 'Borebank, Mr. John James' },

{ name: 'Bradley, Mr. George ("George Arthur Brayton")' },

{ name: 'Brady, Mr. John Bertram' },

{ name: 'Brewe, Dr. Arthur Jackson' },

{ name: 'Brown, Mrs. James Joseph (Margaret Tobin)' },

{ name: 'Butt, Major. Archibald Willingham' },

{ name: 'Cairns, Mr. Alexander' },

**$lte and $gt**  prac4> db.prac4Collection.find({fare : {"$lte":100 , "$gt":50}},{name : 3 , age : 5})

[

{

\_id: ObjectId("65d9be05bfd9f655f3718047"), name: 'Andrews, Miss. Kornelia Theodosia', age: 63

},

{

\_id: ObjectId("65d9be05bfd9f655f3718049"), name: 'Appleton, Mrs. Edward Dale (Charlotte Lamson)', age: 53

},

{

\_id: ObjectId("65d9be05bfd9f655f371804d"), name: 'Aubart, Mme. Leontine Pauline', age: 24

},

{

\_id: ObjectId("65d9be05bfd9f655f371804e"), name: 'Barber, Miss. Ellen "Nellie', age: 26

},

{

\_id: ObjectId("65d9be05bfd9f655f3718053"),

name: 'Bazzani, Miss. Albina', age: 32

},

{

\_id: ObjectId("65d9be05bfd9f655f3718054"), name: 'Beattie, Mr. Thomson', age: 36

},

{

\_id: ObjectId("65d9be05bfd9f655f3718055"), name: 'Beckwith, Mr. Richard Leonard', age: 37

},

{

\_id: ObjectId("65d9be05bfd9f655f3718056"), name: 'Beckwith, Mrs. Richard Leonard (Sallie Monypeny)', age: 47

},

{

\_id: ObjectId("65d9be05bfd9f655f371805b"), name: 'Bishop, Mr. Dickinson H', age: 25

},

{

\_id: ObjectId("65d9be05bfd9f655f371805c"),

name: 'Bishop, Mrs. Dickinson H (Helen Walton)', age: 19

},

]

**Working with multiple fields**

prac4> db.prac4Collection.find({age : {"$gt":50}, fare:{"$gt":100}},{"name":

3 , age : 5 })

[

{

\_id: ObjectId("65d9be05bfd9f655f3718073"),

name: 'Cardeza, Mrs. James Warburton Martinez (Charlotte Wardle Drake)', age: 58

},

{

\_id: ObjectId("65d9be05bfd9f655f37180b4"), name: 'Fortune, Mr. Mark', age: 64

},

{

\_id: ObjectId("65d9be05bfd9f655f37180b5"),

name: 'Fortune, Mrs. Mark (Mary McDougald)', age: 60

},

{

\_id: ObjectId("65d9be05bfd9f655f37180cc"), name: 'Graham, Mrs. William Thompson (Edith Junkins)', age: 58

},

{

\_id: ObjectId("65d9be05bfd9f655f3718101"), name: 'Lurette, Miss. Elise', age: 58

},

{

\_id: ObjectId("65d9be05bfd9f655f3718118"), name: 'Newell, Mr. Arthur Webster', age: 58

},

{

\_id: ObjectId("65d9be05bfd9f655f371813d"), name: 'Ryerson, Mr. Arthur Larned', age: 61

},

{

\_id: ObjectId("65d9be05bfd9f655f3718155"), name: 'Spencer, Mr. William Augustus', age: 57

},

{

\_id: ObjectId("65d9be05bfd9f655f371815e"), name: 'Straus, Mr. Isidor', age: 67

},

{

\_id: ObjectId("65d9be05bfd9f655f371815f"), name: 'Straus, Mrs. Isidor (Rosalie Ida Blun)', age: 63

}, {

\_id: ObjectId("65d9be05bfd9f655f3718175"), name: 'White, Mrs. John Stuart (Ella Holmes)', age: 55

},{

\_id: ObjectId("65d9be05bfd9f655f3718177"), name: 'Wick, Mr. George Dennick', age: 57

}

]

# The "$ne" query operator

prac4> db.prac4Collection.find({"body": {"$ne": ""}},{"name":3 , age : 5 ,"body" : 13 })

[

{

\_id: ObjectId("65d9be05bfd9f655f3718044"), name: 'Allison, Mr. Hudson Joshua Creighton', age: 30, body: 135

},

{

\_id: ObjectId("65d9be05bfd9f655f371804a"), name: 'Artagaveytia, Mr. Ramon', age: 71, body: 22

},

{

\_id: ObjectId("65d9be05bfd9f655f371804b"), name: 'Astor, Col. John Jacob', age: 47, body: 124

},

{

\_id: ObjectId("65d9be05bfd9f655f371805a"),

name: 'Birnbaum, Mr. Jakob', age: 25, body: 148

},

{

\_id: ObjectId("65d9be05bfd9f655f3718068"), name: 'Brandeis, Mr. Emil', age: 48, body: 208

},

{

\_id: ObjectId("65d9be05bfd9f655f371807d"), name: 'Cavendish, Mr. Tyrell William', age: 36, body: 172

},

{

\_id: ObjectId("65d9be05bfd9f655f3718092"), name: 'Crosby, Capt. Edward Gifford', age: 70, body: 269

},

{

\_id: ObjectId("65d9be05bfd9f655f37180a1"), name: 'Douglas, Mr. Walter Donald',

age: 50,

body: 62

},

{

\_id: ObjectId("65d9be05bfd9f655f37180a6"), name: 'Dulles, Mr. William Crothers', age: 39, body: 133

},

{

\_id: ObjectId("65d9be05bfd9f655f37180c1"), name: 'Gee, Mr. Arthur H', age: 47, body: 275

},

{

\_id: ObjectId("65d9be05bfd9f655f37180cb"), name: 'Graham, Mr. George Edward', age: 38, body: 147

},

{

\_id: ObjectId("65d9be05bfd9f655f37180d7"), name: 'Harrison, Mr. William', age: 40,

body: 110

},

{

\_id: ObjectId("65d9be05bfd9f655f37180db"), name: 'Hays, Mr. Charles Melville', age: 55, body: 307

},

{

\_id: ObjectId("65d9be05bfd9f655f37180e3"), name: 'Holverson, Mr. Alexander Oskar', age: 42, body: 38

},

{

\_id: ObjectId("65d9be05bfd9f655f37180ec"), name: 'Jones, Mr. Charles Cresson', age: 46, body: 80

},

{

\_id: ObjectId("65d9be05bfd9f655f37180ee"), name: 'Keeping, Mr. Edwin',

age: 32.5, body: 45 },

{

\_id: ObjectId("65d9be05bfd9f655f37180ef"), name: 'Kent, Mr. Edward Austin', age: 58, body: 258

},

{

\_id: ObjectId("65d9be05bfd9f655f37180fe"), name: 'Long, Mr. Milton Clyde', age: 29, body: 126

},

{

\_id: ObjectId("65d9be05bfd9f655f3718109"), name: 'McCaffry, Mr. Thomas Francis', age: 46, body: 292

}, {

\_id: ObjectId("65d9be05bfd9f655f371810a"), name: 'McCarthy, Mr. Timothy J', age: 54, body: 175

}

]

# The "$in" query operator

prac4> db.prac4Collection.find({"body": {"$in": 175}},{"name":3 , age : 5 ,"body" : 13 })

MongoServerError: $in needs an array

Array is Not in Datasets

**LOGICAL OPERATORS**

prac4> db.prac4Collection.find({"$or":[{"age":{"$gt":30}},{"fare":{"$gt":100 }}]})

[ {

\_id: ObjectId("65d9be05bfd9f655f3718041"), pclass: 1, survived: 1, name: 'Allen, Miss. Elisabeth Walton', sex: 'female', age: 29, sibsp: 0, parch: 0, ticket: 24160, fare: 211.3375, cabin: 'B5', embarked: 'S', boat: 2, body: '',

'home.dest': 'St Louis, MO'

}, {

\_id: ObjectId("65d9be05bfd9f655f3718042"), pclass: 1, survived: 1, name: 'Allison, Master. Hudson Trevor', sex: 'male', age: 0.92, sibsp: 1, parch: 2, ticket: 113781, fare: 151.55, cabin: 'C22 C26', embarked: 'S', boat: 11, body: '',

'home.dest': 'Montreal, PQ / Chesterville, ON'

}, {

\_id: ObjectId("65d9be05bfd9f655f3718043"), pclass: 1, survived: 0, name: 'Allison, Miss. Helen Loraine', sex: 'female', age: 2, sibsp: 1, parch: 2,

ticket: 113781, fare: 151.55, cabin: 'C22 C26', embarked: 'S', boat: '', body: '',

'home.dest': 'Montreal, PQ / Chesterville, ON'

}, {

\_id: ObjectId("65d9be05bfd9f655f3718044"), pclass: 1, survived: 0, name: 'Allison, Mr. Hudson Joshua Creighton', sex: 'male', age: 30, sibsp: 1, parch: 2, ticket: 113781, fare: 151.55, cabin: 'C22 C26', embarked: 'S', boat: '', body: 135,

'home.dest': 'Montreal, PQ / Chesterville, ON'

},

**AND OPERATOR**

prac4> db.prac4Collection.find({"body":{"$lt":50},"body":{"$ne":null}})

[

{

\_id: ObjectId("65d9be05bfd9f655f3718041"), pclass: 1, survived: 1, name: 'Allen, Miss. Elisabeth Walton', sex: 'female', age: 29, sibsp: 0, parch: 0, ticket: 24160, fare: 211.3375, cabin: 'B5', embarked: 'S', boat: 2, body: '',

'home.dest': 'St Louis, MO'

},

{

\_id: ObjectId("65d9be05bfd9f655f3718042"), pclass: 1, survived: 1, name: 'Allison, Master. Hudson Trevor',

sex: 'male', age: 0.92, sibsp: 1, parch: 2, ticket: 113781, fare: 151.55, cabin: 'C22 C26', embarked: 'S', boat: 11, body: '',

'home.dest': 'Montreal, PQ / Chesterville, ON'

},

{

\_id: ObjectId("65d9be05bfd9f655f3718043"), pclass: 1, survived: 0, name: 'Allison, Miss. Helen Loraine', sex: 'female', age: 2, sibsp: 1, parch: 2, ticket: 113781, fare: 151.55, cabin: 'C22 C26', embarked: 'S',

boat: '', body: '',

'home.dest': 'Montreal, PQ / Chesterville, ON'

},

{

\_id: ObjectId("65d9be05bfd9f655f3718044"), pclass: 1, survived: 0, name: 'Allison, Mr. Hudson Joshua Creighton', sex: 'male', age: 30, sibsp: 1, parch: 2, ticket: 113781, fare: 151.55, cabin: 'C22 C26', embarked: 'S', boat: '', body: 135,

'home.dest': 'Montreal, PQ / Chesterville, ON'

},

# ELEMENT OPERATORS USING EXIST

prac4> db.prac4Collection.count({"age":{"$exists":true}})

DeprecationWarning: Collection.count() is deprecated. Use countDocuments or estimatedDocumentCount.

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# USING TYPE

prac4> db.prac4Collection.find({"age":{"$type":"number"}}).pretty()

[

{

\_id: ObjectId("65d9be05bfd9f655f3718041"), pclass: 1, survived: 1, name: 'Allen, Miss. Elisabeth Walton', sex: 'female', age: 29, sibsp: 0, parch: 0, ticket: 24160, fare: 211.3375, cabin: 'B5', embarked: 'S', boat: 2, body: '',

'home.dest': 'St Louis, MO'

},

{

\_id: ObjectId("65d9be05bfd9f655f3718042"), pclass: 1, survived: 1, name: 'Allison, Master. Hudson Trevor', sex: 'male', age: 0.92, sibsp: 1, parch: 2, ticket: 113781, fare: 151.55, cabin: 'C22 C26', embarked: 'S', boat: 11, body: '',

'home.dest': 'Montreal, PQ / Chesterville, ON'

},