Name : Lukhi Laksh
Class: MSC-AIDS
Sub: ADT
Enrollment NO: SR25MSAD016

Q1. Insert the given document.
{
"_id": "65ce58753546634a0dceb369",
"guid": "7eac8b2b-6d0d-47b6-9370-e8ee5d95421c",
"isActive": true,
"tags": {
"item": "et",
"value": {
"company": "Filodyne"
}
},
"balance": "$2,839.71",
"picture": "http://placehold.it/32x32",
"age": 35,
"eye Color": "brown",
"name": "Hartman Tyler",
"gender": "male",
"company": "COGENTRY",
"email": "hartmantyler@cogentry.com",
"phone": "+1 (843) 467-2321",
"friends": [
{
"id": 0,
"name": "Anastasia Mclean"
},
{
"id": 1,
"name": "Douglas Marshall"
},
{
"id": 2,
"name": "Chris Stone"
}

],
"address": "494 Gain Court, Wilmington, Guam, 9348",

```
"registered": "2018-07-22T10:00:39 +04:00",
"latitude": -37.13536,
"longitude": -116.583092,
"greeting": "Hello, Hartman Tyler! You have 1 unread messages.",
"favoriteFruit": "strawberry"
}


—>

db.listingandreviews.insertOne({
"_id": "65ce58753546634a0dceb369",
"guid": "7eac8b2b-6d0d-47b6-9370-e8ee5d95421c",
"isActive": true,
"tags": {
"item": "et",
"value": {
"company": "Filodyne"
}
},
"balance": "$2,839.71",
"picture": "http://placehold.it/32x32",
"age": 35,
"eye Color": "brown",
"name": "Hartman Tyler",
"gender": "male",
"company": "COGENTRY",
"email": "hartmantyler@cogentry.com",
"phone": "+1 (843) 467-2321",
"friends": [
{
"id": 0,
"name": "Anastasia Mclean"
},
{
"id": 1,
"name": "Douglas Marshall"
},
{
"id": 2,
"name": "Chris Stone"
}

],
```

"address": "494 Gain Court, Wilmington, Guam, 9348",
"registered": "2018-07-22T10:00:39 +04:00",
"latitude": -37.13536,
"longitude": -116.583092,
"greeting": "Hello, Hartman Tyler! You have 1 unread messages.",
"favoriteFruit": "strawberry"
}
)

Q2. Insert these two documents at once.

[
{
"_id": "65ce587519ec6121a04ba950",
"guid": "eb5afd03-c2fb-4344-9507-f71541593a15",
"isActive": false,
"tags": {
"item": "est",
"value": {
"company": "Affluex"
}
},
"balance": "$1,442.27",
"picture": "http://placehold.it/32x32",
"age": 35,
"eye Color": "green",
"name": "Malinda Jarvis",
"gender": "female",
"company": "OVATION",
"email": "malindajarvis@ovation.com",
"phone": "+1 (994) 436-2250",
"friends": [
{
"id": 0,
"name": "Carmella Cleveland"
},
{
"id": 1,
"name": "Mariana Moody"
},
{
"id": 2,
"name": "Marcia Tillman"
}
],

"address": "810 Lawn Court, Yettem, Mississippi, 8470",
"registered": "2014-06-30T01:51:15 +04:00",
"latitude": 78.030851,
"longitude": -135.193892,
"greeting": "Hello, Malinda Jarvis! You have 10 unread messages.",
"favoriteFruit": "banana"
},
{
"_id": "65ce587509d686f41ab81f73",
"guid": "961efea4-de36-44e6-ac8c-cc1bf8e4b474",
"isActive": true,
"tags": {
"item": "excepteur",
"value": {
"company": "Earthplex"
}
},
"balance": "$2,896.18",
"picture": "http://placehold.it/32x32",
"age": 33,
"eye Color": "brown",
"name": "Hunt Miles",
"gender": "male",
"company": "SNIPS",
"email": "huntmiles@snips.com",
"phone": "+1 (980) 485-2212",
"friends": [
{
"id": 0,
"name": "Mason Potts"
},
{
"id": 1,
"name": "Laura Beck"
},
{
"id": 2,
"name": "Myrna Warren"
}
],
"address": "472 Eagle Street, Trail, Alaska, 5520",
"registered": "2018-06-28T01:03:27 +04:00",
"latitude": -26.577486,
"longitude": -12.860812,

```
"greeting": "Hello, Hunt Miles! You have 8 unread messages.",
"favoriteFruit": "banana"
}
]




—>

db.listingandreviews.insertMany([
{
"_id": "65ce587519ec6121a04ba950",
"guid": "eb5afd03-c2fb-4344-9507-f71541593a15",
"isActive": false,
"tags": {
"item": "est",
"value": {
"company": "Affluex"
}
},
"balance": "$1,442.27",
"picture": "http://placehold.it/32x32",
"age": 35,
"eye Color": "green",
"name": "Malinda Jarvis",
"gender": "female",
"company": "OVATION",
"email": "malindajarvis@ovation.com",
"phone": "+1 (994) 436-2250",
"friends": [
{
"id": 0,
"name": "Carmella Cleveland"
},
{
"id": 1,
"name": "Mariana Moody"
},
{
"id": 2,
"name": "Marcia Tillman"
}
],
```

"address": "810 Lawn Court, Yettem, Mississippi, 8470",
"registered": "2014-06-30T01:51:15 +04:00",
"latitude": 78.030851,
"longitude": -135.193892,
"greeting": "Hello, Malinda Jarvis! You have 10 unread messages.",
"favoriteFruit": "banana"
},
{
"_id": "65ce587509d686f41ab81f73",
"guid": "961efea4-de36-44e6-ac8c-cc1bf8e4b474",
"isActive": true,
"tags": {
"item": "excepteur",
"value": {
"company": "Earthplex"
}
},
"balance": "$2,896.18",
"picture": "http://placehold.it/32x32",
"age": 33,
"eye Color": "brown",
"name": "Hunt Miles",
"gender": "male",
"company": "SNIPS",
"email": "huntmiles@snips.com",
"phone": "+1 (980) 485-2212",
"friends": [
{
"id": 0,
"name": "Mason Potts"
},
{
"id": 1,
"name": "Laura Beck"
},
{
"id": 2,
"name": "Myrna Warren"
}
],
"address": "472 Eagle Street, Trail, Alaska, 5520",
"registered": "2018-06-28T01:03:27 +04:00",
"latitude": -26.577486,

"longitude": -12.860812,

"greeting": "Hello, Hunt Miles! You have 8 unread messages.",
"favoriteFruit": "banana"
}
]
)

Q3. Update the record with the given document where reviewer_name is Christian.
{
_id: '10059872',
listing_url: 'https://www.airbnb.com/rooms/10059872',
name: 'Soho Cozy, Spacious and Convenient',
summary: 'Clean, fully furnish, Spacious 1 bedroom flat just off the escalator in Mid Levels. 2
minutes From Soho Bar and Restaurants. Located in a quiet alley 1 minute from Sun Yat Sen',
space: '',
description: 'Clean, fully furnish, Spacious 1 bedroom flat just off the escalator in Mid Levels.
2 minutes From Soho Bar and Restaurants. Located in a quiet alley 1 minute from Sun Yat Sen',
neighborhood_overview: '',
notes: '',
transit: '',
access: '',
interaction: '',
house_rules: '',
property_type: 'Apartment',
room_type: 'Entire home/apt',
bed_type: 'Real Bed',
minimum_nights: '4',
maximum_nights: '20',
cancellation_policy: 'flexible',
last_scraped: ISODate("2019-03-11T04:00:00.000Z"),
calendar_last_scraped: ISODate("2019-03-11T04:00:00.000Z"),
first_review: ISODate("2015-12-19T05:00:00.000Z"),
last_review: ISODate("2018-03-27T04:00:00.000Z"),
accommodates: 3,
bedrooms: 1,
beds: 2,
number_of_reviews: 3,
bathrooms: Decimal128("1.0"),
amenities: [
'Air conditioning',
'Kitchen',
'Smoking allowed',
'Doorman',

'Elevator',
'Heating',
'Family/kid friendly',

'Essentials',
'24-hour check-in',
'translation missing: en.hosting_amenity_50'
],
price: Decimal128("699.00"),
weekly_price: Decimal128("5000.00"),
extra_people: Decimal128("0.00"),
guests_included: Decimal128("1"),
images: {
thumbnail_url: '',
medium_url: '',
picture_url:
'https://a0.muscache.com/im/pictures/4533a1dc-6fd8-4167-938d-391c6eebbc19.jpg?aki_policy=
large',
xl_picture_url: ''
},
host: {
host_id: '51624384',
host_url: 'https://www.airbnb.com/users/show/51624384',
host_name: 'Giovanni',
host_location: 'Hong Kong, Hong Kong',
host_about: '',
host_thumbnail_url:
'https://a0.muscache.com/im/pictures/264b82a7-756f-4da8-b607-dc9759e2a10f.jpg?aki_policy=
profile_small',
host_picture_url:
'https://a0.muscache.com/im/pictures/264b82a7-756f-4da8-b607-dc9759e2a10f.jpg?aki_policy=
profile_x_medium',
host_neighbourhood: 'Soho',
host_is_superhost: false,
host_has_profile_pic: true,
host_identity_verified: false,
host_listings_count: 1,
host_total_listings_count: 1,
host_verifications: ['email', 'phone', 'reviews', 'jumio', 'government_id']
},
address: {
street: 'Hong Kong, Hong Kong Island, Hong Kong',
suburb: 'Central & Western District',
government_area: 'Central & Western',

market: 'Hong Kong',
country: 'Hong Kong',
country_code: 'HK',
location: {

type: 'Point',
coordinates: [114.15027, 22.28158],
is_location_exact: true
}
},
availability: {
availability_30: 0,
availability_60: 0,
availability_90: 0,
availability_365: 0
},
review_scores: {
review_scores_accuracy: 10,
review_scores_cleanliness: 10,
review_scores_checkin: 10,
review_scores_communication: 10,
review_scores_location: 10,
review_scores_value: 8,
review_scores_rating: 100
},
reviews: [
{
_id: '56904633',
date: ISODate("2015-12-19T05:00:00.000Z"),
listing_id: '10059872',
reviewer_id: '5302612',
reviewer_name: 'Octavio',
comments: 'The host canceled this reservation 11 days before arrival. This is an automated
posting.'
},
{
_id: '223175530',
date: ISODate("2018-01-01T05:00:00.000Z"),
listing_id: '10059872',
reviewer_id: '48436743',
reviewer_name: 'Ross',
comments: 'Giovanni was very helpful and responsive to my questions. This is a great
apartment that is very convenient for exploring Hong Kong.'
},

```
{
_id: '247251577',
date: ISODate("2018-03-27T04:00:00.000Z"),
listing_id: '10059872',
reviewer_id: '111288273',

reviewer_name: 'Christian',
comments: 'The host canceled this reservation 8 days before arrival. This is an automated
posting.'
}
]
}


—>

db.listingsAndReviews.updateOne(
  {
    "_id": "10059872",
    "reviews.reviewer_name": "Christian"
  },
  {
   $set: {
     "listing_url": "https://www.airbnb.com/rooms/10059872",
     "name": "Soho Cozy, Spacious and Convenient",
     "summary": "Clean, fully furnish, Spacious 1 bedroom flat just off the escalator in Mid Levels.
2 minutes From Soho Bar and Restaurants. Located in a quiet alley 1 minute from Sun Yat
Sen",
     "space": "",
     "description": "Clean, fully furnish, Spacious 1 bedroom flat just off the escalator in Mid
Levels. 2 minutes From Soho Bar and Restaurants. Located in a quiet alley 1 minute from Sun
Yat Sen",
     "neighborhood_overview": "",
     "notes": "",
     "transit": "",
     "access": "",
     "interaction": "",
     "house_rules": "",
     "property_type": "Apartment",
     "room_type": "Entire home/apt",
     "bed_type": "Real Bed",
     "minimum_nights": "4",
     "maximum_nights": "20",
     "cancellation_policy": "flexible",
```

      "last_scraped": ISODate("2019-03-11T04:00:00.000Z"),
      "calendar_last_scraped": ISODate("2019-03-11T04:00:00.000Z"),
      "first_review": ISODate("2015-12-19T05:00:00.000Z"),
      "last_review": ISODate("2018-03-27T04:00:00.000Z"),
      "accommodates": 3,
      "bedrooms": 1,
      "beds": 2,
      "number_of_reviews": 3,
      "bathrooms": Decimal128("1.0"),
      "amenities": [
        "Air conditioning",
        "Kitchen",
        "Smoking allowed",
        "Doorman",
        "Elevator",
        "Heating",
        "Family/kid friendly",
        "Essentials",
        "24-hour check-in",
        "translation missing: en.hosting_amenity_50"
      ],
      "price": Decimal128("699.00"),
      "weekly_price": Decimal128("5000.00"),
      "extra_people": Decimal128("0.00"),
      "guests_included": Decimal128("1"),
      "images": {
        "thumbnail_url": "",
        "medium_url": "",
        "picture_url":
"https://a0.muscache.com/im/pictures/4533a1dc-6fd8-4167-938d-391c6eebbc19.jpg?aki_policy
=large"
      },
      "xl_picture_url": "",
      "host": {
        "host_id": "51624384",
        "host_url": "https://www.airbnb.com/users/show/51624384",
        "host_name": "Giovanni",
        "host_location": "Hong Kong, Hong Kong",
        "host_about": "",
        "host_thumbnail_url":
"https://a0.muscache.com/im/pictures/264b82a7-756f-4da8-b607-dc9759e2a10f.jpg?aki_policy=
profile_small",

      "host_picture_url":
"https://a0.muscache.com/im/pictures/264b82a7-756f-4da8-b607-dc9759e2a10f.jpg?aki_policy=
profile_x_medium",
      "host_neighbourhood": "Soho",
      "host_is_superhost": false,
      "host_has_profile_pic": true,
      "host_identity_verified": false,
      "host_listings_count": 1,
      "host_total_listings_count": 1,
      "host_verifications": [
        "email",
        "phone",
        "reviews",
        "jumio",
        "government_id"
      ]
    },
    "address": {
      "street": "Hong Kong, Hong Kong Island, Hong Kong",
      "suburb": "Central & Western District",
      "government_area": "Central & Western",
      "market": "Hong Kong",
      "country": "Hong Kong",
      "country_code": "HK",
      "location": {
        "type": "Point",
        "coordinates": [
          114.15027,
          22.28158
        ],
        "is_location_exact": true
      }
    },
    "availability": {
      "availability_30": 0,
      "availability_60": 0,
      "availability_90": 0,
      "availability_365": 0
    },
    "review_scores": {
      "review_scores_accuracy": 10,
      "review_scores_cleanliness": 10,
      "review_scores_checkin": 10,
      "review_scores_communication": 10,

```
      "review_scores_location": 10,
      "review_scores_value": 8,
      "review_scores_rating": 100
    },
    "reviews": [
      {
        "_id": "56904633",
        "date": ISODate("2015-12-19T05:00:00.000Z"),
        "listing_id": "10059872",
        "reviewer_id": "5302612",
        "reviewer_name": "Octavio",
        "comments": "The host canceled this reservation 11 days before arrival. This is an
automated posting."
      },
      {
        "_id": "223175530",
        "date": ISODate("2018-01-01T05:00:00.000Z"),
        "listing_id": "10059872",
        "reviewer_id": "48436743",
        "reviewer_name": "Ross",
        "comments": "Giovanni was very helpful and responsive to my questions. This is a great
apartment that is very convenient for exploring Hong Kong."
      },
      {
        "_id": "247251577",
        "date": ISODate("2018-03-27T04:00:00.000Z"),
        "listing_id": "10059872",
        "reviewer_id": "111288273",
        "reviewer_name": "Christian",
        "comments": "The host canceled this reservation 8 days before arrival. This is an
automated posting."
      }
    ]
  }
)
```

Ans.

```
db.listingandreviews.find(
  {
    "property_type": "House"
  }
)
```

Q4. Find all the listings with name, address, reviewer_name, and review_scores_rating in the listingsAndReviews collection that have a "hot tub" amenity and are located in the United States.

—>

```
db.listingandreviews.find(
  {
    "amenities": "Hot tub",
    "address.country": "United States"
  },
  {
    "name": 1,
    "address": 1,
    "reviews.reviewer_name": 1,
    "review_scores.review_scores_rating": 1,
    "_id": 0
  }
)
```

Q5. Find all listings with name, address, host in the listingsAndReviews collection that have a host with a host_name containing the word "Livia".

—>

```
db.listingandreviews.find(
  {
    "host.host_name": "Livia"
  },
  {
    "name": 1,
    "address": 1,
    "host": 1,
    "_id": 0
```

```
  }
)
```

Q6. Retrieve all documents with name, address, reviewer_name, review_scores_ratingin the listingsAndReviewscollection that have a number_of_reviews field is equal to 0.

—>

```
db.listingandreviews.find(
  {
    "number_of_reviews": 0
  },
  {
    "name": 1,
    "address": 1,
    "reviews.reviewer_name": 1,
    "review_scores.review_scores_rating": 1,
    "_id": 0
  }
)
```

Q7. Find the listings with listing_url, name, address and amenities, price, review scores in the listingsAndReviews collection that have the highest nightly prices.

—>

```
db.listingandreviews.find(
  {},
  {
    "listing_url": 1,
    "name": 1,
    "address": 1,
    "amenities": 1,
    "price": 1,
    "review_scores": 1,
    "_id": 0
  }
)
.sort(
  {
    "price": -1
  }
```

```
)
.limit(1)
```

Q8. Find all the listings in the listingsAndReviews collection with listing_url, name, host_name, host_location, reviewer_name and price that have a nightly price greater than $500.

—>.

```
db.listingandreviews.find(
  {
    "price": { $gt: 500.00 }
  },
  {
    "listing_url": 1,
    "name": 1,
    "host.host_name": 1,
    "host.host_location": 1,
    "reviews.reviewer_name": 1,
    "price": 1,
    "_id": 0
  }
)
```

Q9. Find all the listings in the listingsAndReviews collection that are located in Brazil and have a review score rating of at least 9. Return name, address, and review_scores_rating.

—>

```
db.listingandreviews.find(
  {
    "address.country": "Brazil",
    "review_scores.review_scores_rating": { $gte: 90 }
  },
  {
    "name": 1,
    "address": 1,
    "review_scores.review_scores_rating": 1,
    "_id": 0
  }
```

)

Q10. Retrieve all documents with name, address, host, availability in the listingsAndReviews collection where the availability_365 field is greater than 300.

—>

```
db.listingandreviews.find(
 {
   "availability.availability_365": { $gt: 300 }
 },
 {
   "name": 1,
   "address": 1,
   "host": 1,
   "availability": 1,
   "_id": 0
 }
)
```

Q11. Delete the documents where reviewer_name is Christian.

—>

```
db.listingandreviews.deleteMany(
 {
   "reviews.reviewer_name": "Christian"
 }
)
```

Q12. Show total number of documents.

—>

```
 db.listingandreviews.count()
```

Q13. Retrieve all documents with listing_url, name, bedrooms, cleaning_fee, and price in the listingsAndReviews collectionwhere the cleaning_fee field is not null.

—>

```
db.listingandreviews.find(
 {
```

```
  "cleaning_fee": { $exists: true, $ne: null, $ne: "" }
 },
 {
  "listing_url": 1,
  "name": 1,
  "bedrooms": 1,
  "cleaning_fee": 1,
  "price": 1,
  "_id": 0
 }
)
```

Q14. Retrieve all documents with listing_url, name, host, price in the listingsAndReviews collection where the host_verifications array contains "email".

```
—>
db.listingandreviews.find(
 {
  "host.host_verifications": "email"
 },
 {
  "listing_url": 1,
  "name": 1,
  "host": 1,
  "price": 1,
  "_id": 0
 }
)
```

Q15. Retrieve all documents with listing_url, name, property_type, bed, price in the listingsAndReviewscollectionwhere the property_type field is equal to "Apartment" and the beds field is greater than or equal to 2.

```
—>
db.listingandreviews.find(
 {
  "property_type": "Apartment",
  "beds": { $gte: 2 }
 },
 {
  "listing_url": 1,
  "name": 1,
  "property_type": 1,
  "beds": 1,
```

```
        "price": 1,
        "_id": 0
    }
)
```