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| **Lab No** | 06 | **Reg. No** | 224921 |
| **Student Name** | Muhammad Saad Tariq | **Section** | A |

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| Solution Task 1 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/mydb";  client.connect(url, function(err, db){  if(err)  throw err;  console.log("Database Created");  db.close();  });  Output: |

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| Solution Task 2 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017";  client.connect(url, function(err, db){  if(err)  throw err;  var dbo = db.db("mydb");  dbo.createCollection("customers", function(err, res){  if(err)  throw err;  console.log("COllection Created");  db.close();  });  });  Output: |

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| Solution Task 3 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if(err)  throw err;  var dbo = db.db("mydb");  var obj = {name:"Company Inc", address:"Highway37"};  dbo.collection("customers").insertOne(obj, function(err, res){  if (err)  throw err;  console.log("Document inserted");  db.close();  });  });  Output: |

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| Solution Task 4 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if(err)  throw err;  var dbo = db.db("mydb");  var obj = [  {name:"John", address:"Highway37"},  { name: 'Peter', address: 'Lowstreet 4'},  { name: 'Amy', address: 'Apple st 652'},  { name: 'Hannah', address: 'Mountain 21'},  { name: 'Michael', address: 'Valley 345'},  { name: 'Sandy', address: 'Ocean blvd 2'},  { name: 'Betty', address: 'Green Grass 1'},  { name: 'Richard', address: 'Sky st 331'},  { name: 'Susan', address: 'One way 98'},  { name: 'Vicky', address: 'Yellow Garden 2'},  { name: 'Ben', address: 'Park Lane 38'},  { name: 'William', address: 'Central st 954'},  { name: 'Chuck', address: 'Main Road 989'},  { name: 'Viola', address: 'Sideway 1633'}  ];  dbo.collection("customers").insertMany(obj, function(err, res){  if (err)  throw err;  console.log(res.insertedCount+" documents inserted");  db.close();  });  });  Output: |

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| Solution Task 5 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  var obj = [  {\_id: 16, name: 'Chocolate Heaven'},  { \_id: 17, name: 'Tasty Lemon'},  { \_id: 18, name: 'Vanilla Dream'}  ];  dbo.collection("products").insertMany(obj, function(err, res){  if(err)  throw err;  console.log(res);  db.close();  });  });  Output: |

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| Solution Task 6 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  dbo.collection("customers").findOne({}, function(err, result){  if(err)  throw err;  console.log(result.name);  db.close();  });  });  Output: |

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| Solution Task 7 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  dbo.collection("customers").find({}).toArray(function(err, result){  if(err)  throw err;  console.log(result);  db.close();  });  });  Output: |

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| Solution Task 8 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  var query = {address: 'Park Lane 38'};  dbo.collection("customers").find(query).toArray(function(err, result){  if(err)  throw err;  console.log(result);  db.close();  });  });  Output: |

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| Solution Task 9 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  var cond = {name: 1};  dbo.collection("customers").find({}).sort(cond).toArray(function(err, result){  if(err)  throw err;  console.log(result);  db.close();  });  });  Output: |

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| Solution Task 10 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  var query = {address: 'Mountain 21'};  dbo.collection("customers").deleteOne(query, function(err, obj){  if(err)  throw err;  console.log("document deleted");  db.close();  });  });  Output:  Before deletion:    After deletion: |

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| Solution Task 11 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  var query = {address: /^O/ };  dbo.collection("customers").deleteMany(query, function(err, obj){  if(err)  throw err;  console.log(obj.result.n+" documents have been deleted");  db.close();  });  });  Output:      Before deletion:    After deletion: |

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| Solution Task 12 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  dbo.collection("customers").drop(function(err, delOK){  if(err)  throw err;  if(delOK)  console.log("Collection deleted");  db.close();  });  });  Output: |

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| Solution Task 13 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  var query = {address: 'Valley 345'};  var new\_val = {$set: {name: 'Mickey', address: 'Canyon 123'}};  dbo.collection("customers").updateOne(query, new\_val,function(err, res){  if(err)  throw err;  console.log("document updated");  db.close();  });  });  Output:  Before update:    After update: |

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| Solution Task 14 |
| Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  dbo.collection("customers").find().limit(5).toArray(function(err, result){  if(err)  throw err;  console.log(result);  db.close();  });  });  Output: |

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| Solution Task 15 |
| Collection Views:  Collection: “orders”    Collection: “products”    Code:  var client = require('mongodb').MongoClient;  var url = "mongodb://localhost:27017/";  client.connect(url, function(err, db){  if (err)  throw err;  var dbo = db.db("mydb");  var query = [  {\_id: 1, product\_id: 16, status: 1},  {\_id: 2, product\_id: 20, status: 3}  ];  dbo.collection('orders').aggregate([  {  $lookup:  {  from: 'products',  localField: 'product\_id',  foreignField: '\_id',  as: 'order\_detail'  }  }  ]).toArray(function(err, res){  if(err)  throw err;  console.log(JSON.stringify(res));  db.close();  });  });  Output: |