# **MONGODB DATABASE**

Design, development and implementation of a MongoDB database for Teton Whitewater Kayak (TWK) Company

## 1. Introduction and Objective.

Teton Whitewater Kayak (TWK) is a company that conducts their business mostly online and generates high volume transactions. Therefore, due to the high-volume nature of the business transactions, TWK management has decided to migrate from a Relational database (RDB) system to MongoDB. In this project, we have created MongoDB database, collections, and sample documents in each collection. This was done based on the TWK case. This MongoDB database we created should be able to support TWK's high volume online business transactions.

The database will allow TWK to enter, record, process, and print transactions having to do with equipment rentals, reservations, returns, sales and inventory functions. This is an as-is purpose. While this is mostly a data-entry application, there is a need for some analysis when it comes to late fees, discount rates and others. The users will primarily be employees.

This report will include diagrams used in the planning phase of MongoDB database, the code used to create database, collections, and documents in MongoDB. Additionally, there will also be screenshots of how functions like find() and limit()used with pretty() method to retrieve and display documents from each collection.

## 2. The ERD or ERD-like diagram used to depicting the data requirements for TWK.





# **Equipment Rental** cust\_id reservation\_id rental\_id equip\_barcodeID equip\_type\_id equip\_status rental\_charge checkout\_date equip\_deposit\_amt deposit\_increase\_interval customer\_info{} equip\_rental\_price\_per\_d

# 3. The codes with which the database, collections, and documents were created in MongoDB.

```
use Team1 TWK
//EQUIPMENT COLLECTION
//DOC 1, Equipment--
db.Equipment.insertOne({equip_barcodeID: "CBS09OBE",
       equip_type: "creekboat single",
       equip class: "CBS"
       inventory count CBS: 25,
       equiptypeCBS count instock: 25,
       equip status: "in stock",
       storage location: "OBE",
       equip condition: "new or like new",
       equip full retail price: 450,
       equip replace: "no",
       equip rental price per day: 50,
       equip deposit amt: 15
       })
//DOC 2, Equipment--
db.Equipment.insertOne({
       equip barcodeID: "CBS18OBE",
       equip type: "creekboat single",
       equip class: "CBS"
       inventory count CBS: 25,
       equiptypeCBS count instock: 25,
       equip status: "in stock",
       storage location: "SSW",
       equip_condition: "new or like new",
       equip_full_retail_price: 450,
       equip_replace: "no",
       equip_rental_price_per_day: 50,
       equip deposit amt: 15
       })
//COSTUMER COLLECTION
//DOC 1, Customer--
db.Customer.insertOne(
       cust id: 1000001,
       cust_fname: "Arayana",
       cust Iname: "Janson",
       cust phone: 2695552222,
       cust_email: "arayana.a.janson@wmich.edu",
       cust_address:
               {
               cust_street: "3713 West Main",
               cust_city: "Kalamazoo",
               cust_state: "MI",
               cust_zip: 49006
               },
       cust_history: "yes",
       cust rep:
```

```
cust history value: "bad",
               return problem: "yes",
               return problem details:
                       return id: 6794857,
                       equipments_rented:
{equip_barcodeID: "CBS03OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage"},
{equip_barcodeID: "CBS04OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage"}
                              ],
                       equip return problem: "late return",
                       rental date: "2020-03-17",
                       checkout date: "2020-03-17",
                       return_date: "2020-03-18",
                       checkin date: "2020-03-19",
                       deposit amt total: 130,
                       amount owed: 100,
                       payment method: "cash",
                       unreturned equipment: "no"
               }
       })
//DOC 2, Customer--
db.Customer.insertOne({
       cust id: 1000002,
       cust_fname: "Kimberly",
       cust_Iname: "Chong",
       cust phone: 2693332222,
       cust email: "kimberly.chong@wmich.edu",
       cust address:
               {
               cust street: "3709 West Main",
               cust_city: "Kalamazoo",
               cust_state: "MI",
               cust_zip: 49006
               },
       cust_history: "yes",
       cust_rep: "yes"
       })
//EQUIPMENT RESERVATION COLLECTION
//DOC 1, Equipment Reservation--
db.Equipment_Reservation.insertOne(
       cust_info:
               cust id: 1000001,
               cust_fname: "Arayana",
               cust_Iname: "Janson",
               cust_phone: 2695552222,
               cust email: "arayana.a.janson@wmich.edu",
```

cust address:

```
cust street: "3713 West Main",
                       cust city: "Kalamazoo",
                       cust_state: "MI",
                       cust_zip: 49006
                       },
               cust history: "yes",
               cust rep:
                       cust history value: "bad",
                       return problem: "yes",
                       return problem details:
                               {
                               return id: 6794857,
                               equipments rented:
{equip barcodeID: "CBS03OBE", equipment type: "creekboat single", equip class: "CBS", equip condition: "insignificant
cosmetic damage"},
{equip barcodeID: "CBS04OBE", equipment type: "creekboat single", equip class: "CBS", equip condition: "insignificant
cosmetic damage"}
                                      ],
                               equip return problem: "late return",
                               rental date: "2020-03-17",
                               checkout date: "2020-03-17",
                               return_date: "2020-03-18",
                               checkin date: "2020-03-19",
                               deposit amt total: 130,
                               amount owed: 100,
                               payment_method: "cash",
                               unreturned_equipment: "no"
                       }
               },
       reservation id: 1234567,
       reservation date: "2020-11-28",
       equipments_reserved:
{equip_barcodeID: "CBS09OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage", same_day: "yes", storage_location: "OBE", equip_status: "in stock", equip_rental_price_per_day: 50,
equip_deposit_amt: 15},
{equip_barcodeID: "CBS10OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage", same_day: "yes", storage_location: "OBE", equip_status: "in stock", equip_rental_price_per_day: 50,
equip deposit amt: 15}
               ],
       equiptypeCBS count instock: 25,
       rqstd pickup date: "2020-11-28",
       rgstd return date: "2020-11-29",
       total_deposit_amt: 30,
       equip available: "yes",
       email availability:
               equip_available: "yes",
               cust_info:
                       cust id: 1000001,
```

```
cust fname: "Arayana",
                       cust Iname: "Janson",
                       cust phone: 2695552222,
                       cust_email: "arayana.a.janson@wmich.edu",
                       cust_address:
                               {
                               cust_street: "3713 West Main",
                               cust city: "Kalamazoo",
                               cust_state: "MI",
                               cust zip: 49006,
                               }
                       }
               },
       equip total rental price per day: 100,
       payment_method: "cash"
       })
//DOC 2, Equipment Reservation--
db.Equipment Reservation.insertOne(
       cust_info:
               cust id: 1000002,
               cust fname: "Kimberly",
               cust_Iname: "Chong",
               cust phone: 2693332222,
               cust email: "kimberly.chong@wmich.edu",
               cust address:
                       {
                       cust_street: "3709 West Main",
                       cust_city: "Kalamazoo",
                       cust state: "MI",
                       cust zip: 49006
                       },
               cust history: "yes",
               cust_rep:
                       cust_history_value: "good",
                       return problem: "no"
                       }
               },
       reservation_id: 1235678,
       reservation date: "2020-12-05",
       equipments reserved:
{equip barcodeID: "TRT23SSW", equipment type: "touring tandem", equip class: "TRT", equip condition: "new or like
new", same day: "no", storage location: "SSW", equip status: "in stock", equip rental price per day: 125,
equip_deposit_amt: 35},
{equip_barcodeID: "TRT24SSW", equipment_type: "touring tandem", equip_class: "TRT", equip_condition: "new or like
new", same_day: "no", storage_location: "SSW", equip_status: "in stock", equip_rental_price_per_day: 125,
equip_deposit_amt: 35}
               ],
       equiptypeCBS_count_instock: 24,
       rgstd pickup date: "2020-12-13",
       rqstd_return_date: "2020-12-14",
```

```
total deposit amt: 70,
       equip available: "yes",
       email availability:
               equip available: "yes",
               cust info:
                       cust id: 1000002,
                       cust fname: "Kimberly",
                       cust Iname: "Chong",
                       cust phone: 2693332222,
                       cust email: "kimberly.chong@wmich.edu",
                       cust address:
                               cust street: "3709 West Main",
                               cust_city: "Kalamazoo",
                               cust state: "MI",
                               cust zip: 49006
                               }
                       }
               },
       same_day: "no",
       equip total rental price per day: 250,
       payment method: "cash"
       })
//EQIPMENT RENTAL COLLECTION
//DOC 1, Equipment Rental--
db.Equipment Rental.insertOne(
       reservation id: 1234567,
       rental id: 5987654,
       equipments rented:
{equip barcodeID: "CBS09OBE", equipment type: "creekboat single", equip class: "CBS", equip condition: "insignificant
cosmetic damage", same_day: "yes", storage_location: "OBE", equip_status: "rented", equip_rental_price_per_day: 50,
equip_deposit_amt: 15},
{equip_barcodeID: "CBS09OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage", same day: "yes", storage location: "OBE", equip status: "rented", equip rental price per day: 50,
equip_deposit_amt: 15}
               1,
       rqstd_pickup_date: "2020-11-28",
       rgstd return date: "2020-11-29",
       checkout date: "2020-11-28",
       return date: "2020-11-29",
       equiptypeCBS count instock: 23,
       total deposit amt: 30,
       deposit_increase_interval: 1.25,
       customer_info:
               {
               cust_id: 1000001,
               cust_fname: "Arayana",
               cust_Iname: "Janson",
               cust phone: 2695552222,
               cust email: "arayana.a.janson@wmich.edu",
```

```
cust address:
                       cust street: "3713 West Main",
                       cust_city: "Kalamazoo",
                       cust state: "MI",
                       cust zip: 49006
                       },
               cust history: "yes",
               cust_rep:
                       cust history value: "bad",
                       return problem: "yes",
                       return problem details:
                              return id: 6794857,
                              equipments rented:
{equip_barcodeID: "CBS03OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage"},
{equip barcodeID: "CBS04OBE", equipment type: "creekboat single", equip class: "CBS", equip condition: "insignificant
cosmetic damage"}
                                      ],
                              equip return problem: "late return",
                              rental date: "2020-03-17",
                              checkout_date: "2020-03-17",
                              return date: "2020-03-18",
                              checkin date: "2020-03-19",
                              deposit amt total: 130,
                              amount owed: 100,
                              payment method: "cash",
                              unreturned_equipment: "no"
                              }
                       }
               },
       amt owed resolved: "yes",
       equip_total_rental_price_per_day: 100,
       number_days_renting: 1,
       payment_method: "cash"
       })
//DOC 2, Equipment_Rental--
db.Equipment Rental.insertOne({
       reservation id: 1235678,
       rental id: 5987782,
       equipments rented:
{equip barcodeID: "TRT23SSW", equipment type: "touring tandem", equip class: "TRT", equip condition: "new or like
new", same_day: "no", storage_location: "SSW", equip_status: "rented", equip_rental_price_per_day: 125,
equip deposit amt: 35},
{equip barcodeID: "TRT24SSW", equipment type: "touring tandem", equip class: "TRT", equip condition: "new or like
new", same_day: "no", storage_location: "SSW", equip_status: "rented", equip_rental_price_per_day: 125,
equip_deposit_amt: 35}
               ],
       rgstd pickup date: "2020-12-13",
       rgstd return date: "2020-12-14",
```

```
checkout date: "2020-12-13",
       return date: "2020-12-14",
       equiptypeCBS count instock: 22,
       total_deposit_amt: 70,
       deposit_increase_interval: 1.25,
       cust_info:
               cust id: 1000002,
               cust_fname: "Kimberly",
               cust_Iname: "Chong",
               cust phone: 2693332222,
               cust email: "kimberly.chong@wmich.edu",
               cust address:
                       cust_street: "3709 West Main",
                       cust_city: "Kalamazoo",
                       cust state: "MI",
                       cust zip: 49006
                       },
               cust_history: "yes",
               cust rep:
                       cust history value: "good",
                       return problem: "no"
               },
       equip_total_rental_price_per_day: 250,
       number days renting: 1,
       payment method: "cash",
       })
//*Problem With Return Collection
//Doc 1, Problem With Return--
db.Problem With Return.insertOne(
       cust_id: 1000001,
       return_id: 6794857,
       equipments_rented:
{equip barcodeID: "CBS03OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage"},
{equip_barcodeID: "CBS04OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage"}
               ],
       equip return problem: "late return",
       rental date: "2020-03-17",
       checkout date: "2020-03-17",
       return_date: "2020-03-18",
       checkin date: "2020-03-19",
       amount owed: 100
       })
//Doc 2, Problem_With_Return--
db.Problem_With_Return.insertOne(
       {
```

```
cust id: 1000500,
       return id: 5432123,
       equipments rented:
{equip_barcodeID: "CBS07OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage"},
{equip barcodeID: "TRT04OBE", equipment type: "touring tandem", equip class: "TRT", equip condition: "new or like
new"}
               ],
       equip return problem: "late return",
       rental date: "2020-04-22",
       checkout date: "2020-04-22",
       return date: "2020-04-23",
       checkin date: "2020-04-24",
       amount owed: 175
       })
//*Rental Agreement Collection, 2.1.2 #7 and 2.1.5(?)
//Doc 1, Rental Agreement--
db.Rental_Agreement.insertOne(
       Header Section:
               rental id: 5437682,
               checkout_date: "2020-11-28",
               return_date: "2020-11-29",
               customer_info:
                       {
                       cust id: 1000001,
                       cust_fname: "Arayana",
                       cust Iname: "Janson",
                       cust phone: 2695552222,
                       cust email: "arayana.a.janson@wmich.edu",
                       cust address:
                               cust_street: "3713 West Main",
                               cust_city: "Kalamazoo",
                               cust_state: "MI",
                               cust zip: "49006"
                               }
                       },
               },
       Detail Section:
               equipments rented:
{equip barcodeID: "CBS09OBE", equipment type: "creekboat single", equip class: "CBS", equip condition: "insignificant
cosmetic damage", equip_rental_price_per_day: 50, equip_deposit_amt: 15},
{equip_barcodeID: "CBS10OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage", equip_rental_price_per_day: 50, equip_deposit_amt: 15}
                       ],
               total_deposit_amt: 30,
               equip_total_rental_price_per_day: 100,
               rental_tax: 0.06,
               rental total: 106
```

```
},
       Footer_Section:
               rental_subtotal: 100,
               deposit_subtotal: 30,
               rental tax: 0.06,
               rental grand total: 136
               }
       })
//Doc 2, Rental Agreement--
db.Rental Agreement.insertOne(
       Header Section:
               rental id: 5987782,
               checkout date: "2020-12-13",
               return_date: "2020-12-14",
               cust info:
                       {cust id: 1000002,
                       cust fname: "Kimberly",
                       cust Iname: "Chong",
                       cust phone: 2693332222,
                       cust email: "kimberly.chong@wmich.edu",
                       cust_address:
                               {
                               cust_street: "3709 West Main",
                               cust city: "Kalamazoo",
                               cust state: "MI",
                               cust_zip: 49006
                       }
               },
       Detail Section:
               equipments_rented:
{equip_barcodeID: "TRT23SSW", equipment_type: "touring tandem", equip_class: "TRT", equip_condition: "new or like
new", same_day: "no", equip_rental_price_per_day: 125, equip_deposit_amt: 35},
{equip_barcodeID: "TRT24SSW", equipment_type: "touring tandem", equip_class: "TRT", equip_condition: "new or like
new", same_day: "no", equip_rental_price_per_day: 125, equip_deposit_amt: 35}
                       ],
               total deposit amt: 70,
               equip total rental price per day: 250,
               rental tax: 0.06,
               rental_total: 265
               },
       Footer_Section:
               equip_total_rental_price_per_day: 250,
               total_deposit_amt: 70,
               rental_tax: 0.06,
               rental_grand_total: 335
       })
```

```
//EQUIPMENT RETURN COLLECTION
//Doc 1, Equipment Return--
db.Equipment Return.insertOne(
       cust id: 1000001,
       reservation id: 1234567,
       rental id: 5987654,
       return id: 7895432,
       return_timestamp: "2020-11-29T09:17:09Z",
       rental id: 5437682,
       rgstd pickup date: "2020-11-28",
       rgstd return_date: "2020-11-29",
       checkout date: "2020-11-28",
       return date: "2020-11-30",
       checkin date: "2020-11-30",
       actual return_time: "ontime",
       rental amts:
               equip total rental price per day: 100,
               total deposit amt: 30,
               rental tax: 0.06,
               rental grand total: 136
               },
       equip inspection: "undamaged",
       degree_of_damage: 0,
       late_fee:
               actual return time: "ontime",
               days late: 0,
               rental_total: 100
               },
       damage fee:
               equip inspection: "good",
               deposit damage portion: 0
               deposit_damage_retained: 0
               },
       deposit_retained:
               late_fee: 0,
               damage_fee: 0
               },
       equipments returned:
{equip barcodeID: "CBS09OBE", equipment type: "creekboat single", equip class: "CBS", equip condition: "insignificant
cosmetic damage", same day: "yes", storage location: "OBE", equip status: "in stock", equip rental price per day: 50,
equip_deposit_amt: 15},
{equip_barcodeID: "CBS09OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage", same_day: "yes", storage_location: "OBE", equip_status: "instock", equip_rental_price_per_day: 50,
equip_deposit_amt: 15}
               ],
       cust_history_updated:
               cust history: "yes",
```

```
cust rep: "no",
               equip condition: "already inventoried damage"
               }
       })
//Doc 2, Equipment Return--
db.Equipment Return.insertOne(
       cust id: 1000002,
       reservation id: 1235678,
       rental id: 5987782,
       return id: 7895778,
       return timestamp: "2020-12-14T07:23:34Z",
       rgstd pickup date: "2020-12-13",
       rqstd_return_date: "2020-12-14",
       checkout_date: "2020-12-13",
       return date: "2020-12-14",
       checkin date: "2020-12-14",
       actual return time: "ontime",
       rental_amts:
               {
               equip total rental price per day: 250,
               total deposit amt: 70,
               rental tax: 0.06,
               rental_grand_total: 335
               },
       equip inspection: "undamaged",
       degree of damage: 0,
       late_fee:
               actual_return_time: "ontime",
               days late: 0,
               rental total: 320
               },
       damage fee:
               equip_inspection: "good",
               deposit_damage_portion: 0
               deposit damage retained: 0
               },
       deposit_retained:
               late fee: 0,
               damage fee: 0
               },
       equipments_returned:
{equip_barcodeID: "TRT23SSW", equipment_type: "touring tandem", equip_class: "TRT", equip_condition: "new or like
new", same_day: "no", storage_location: "SSW", equip_status: "in stock", equip_rental_price_per_day: 125,
equip deposit amt: 35},
{equip_barcodeID: "TRT24SSW", equipment_type: "touring tandem", equip_class: "TRT", equip_condition: "new or like
new", same_day: "no", storage_location: "SSW", equip_status: "in stock", equip_rental_price_per_day: 125,
equip_deposit_amt: 35}
               ],
       cust_history_updated:
```

```
cust history: "yes",
               cust rep: "no",
               equip_condition: "already inventoried damage"
       })
//*Monies Kept Receipt Collection, 2.1.3 #6
//Doc 1, Deposit Retained--
db.Deposit Retained.insertOne(
       cust_id: 1000001,
       return id: 7895432,
       equipments rented:
{equip_barcodeID: "CBS09OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_condition: "insignificant
cosmetic damage"},
{equip barcodeID: "CBS10OBE", equipment type: "creekboat single", equip class: "CBS", equip condition: "insignificant
cosmetic damage"}
               ],
       equip return problem: "none",
       checkout date: "2020-11-28",
       return date: "2020-11-29",
       checkin date: "2020-11-30",
       amount_owed: 0,
       deposit_amt_total: 30,
       returned deposit: 30,
       payment method: "cash"
       })
//Doc 2, Deposit Retained--
db.Deposit Retained.insertOne({
       cust id: 1000002,
       return id: 7895778,
       equipments rented:
{equip_barcodeID: "TRT23SSW", equipment_type: "touring tandem", equip_class: "TRT", equip_condition: "new or like
{equip barcodeID: "TRT24SSW", equipment type: "touring tandem", equip class: "TRT", equip condition: "new or like
new"}
               ],
       equip_return_problem: "none",
       checkout date: "2020-12-13",
       return_date: "2020-12-14",
       checkin date: "2020-12-14",
       amount owed: 0,
       deposit amt total: 70,
       returned_deposit: 70,
       payment method: "cash"
       })
```

```
//2.1.4 Equipment Sale Collection
//Doc 1, Equipment Sale--
db.Equipment Sale.insertOne(
       sale_id: 00283,
       customer_info:
               cust id: 1000001,
               cust_fname: "Arayana",
               cust_Iname: "Janson",
               cust phone: 2695552222,
               cust email: "arayana.a.janson@wmich.edu",
               cust address:
                       cust_street: "3713 West Main",
                       cust_city: "Kalamazoo",
                       cust state: "MI",
                       cust zip: "49006"
               },
       equip_purchase:
               equip barcodeID: "TRT14SSW",
               equip full retail price: 625,
               equip_type: "touring tandem",
               equip_class: "TRT",
               equip_condition: "insignificant cosmetic damage"
               },
       sale discount: 0.6,
       sale_subtotal: 375
       sales_tax_interval: 1.0625,
       sale grandtotal: 398,
       sale date: "2020-12-20",
       purchase time: "2020-12-20T09:34:21Z",
       payment method: "cash",
       sale_status: "sold",
       equip_status: "sold",
       equip_class: "OOI",
       equiptypeTRT_count_instock: 24,
       rqstd_pickup_date: "2020-12-20"
       })
//Doc 2, Equipment Sale--
db.Equipment Sale.insertOne({
       sale id: 00299,
       customer_info:
               {
               cust_id: 1000546,
               cust_fname: "Joe",
               cust Iname: "Jupiter",
               cust_phone: 2695592222,
               cust_email: "joe.jupiter@wmich.edu",
               cust_address:
                       cust_street: "3718 West Main",
```

```
cust city: "Kalamazoo",
                       cust state: "MI",
                       cust zip: "49006"
               },
        equip_purchase:
               equip_barcodeID: "TRT02SSW",
               equip_full_retail_price: 625,
               equip_type: "touring tandem",
                equip_class: "TRT",
               equip condition: "insignificant cosmetic damage"
               },
        sale discount: 0.6,
        sale_subtotal: 375
        sales_tax_interval: 1.0625,
        sale grandtotal: 398,
        sale date: "2020-11-25",
        purchase time: "2020-11-25T22:32:13Z",
        payment method: "cash",
        sale_status: "sold",
        equip status: "sold",
        equip class: "OOI",
        equiptypeTRT count instock: 23,
        rqstd_pickup_date: "2020-11-25"
        })
//Charges Record Collection, 2.1.4 #3.b
//Doc 1, Sales Payment
db.Sales_Payment.insertOne(
        sale id: 00283,
        customer_info:
               {
               cust id: 1000001,
               cust_fname: "Arayana",
               cust_Iname: "Janson",
               cust_phone: 2695552222,
               cust_email: "arayana.a.janson@wmich.edu",
               cust_address:
                       cust_street: "3713 West Main",
                       cust_city: "Kalamazoo",
                       cust state: "MI",
                       cust zip: "49006"
               },
        equip_purchase:
               equip_barcodeID: "TRT14SSW",
                equip_full_retail_price: 625,
               equip_type: "touring tandem",
                equip_class: "TRT",
               equip condition: "insignificant cosmetic damage"
               },
```

```
payment: "cash",
        sale date: "2020-12-20",
        purchase time: "2020-12-20T09:34:21Z",
        sale_equip:
               sale_discount: 0.6,
               sale_subtotal: 375
               sales tax interval: 1.0625,
               sale_grandtotal: 398
               },
        rqstd_pickup_date: "2020-12-20"
        })
//Doc 2, Sales Payment
db.Sales_Payment.insertOne({
        sale_id: 00299,
        customer_info:
               cust id: 1000546,
               cust_fname: "Joe",
               cust_Iname: "Jupiter",
               cust phone: 2695592222,
               cust email: "joe.jupiter@wmich.edu",
               cust address:
                       cust_street: "3718 West Main",
                       cust_city: "Kalamazoo",
                       cust_state: "MI",
                       cust_zip: "49006"
               },
        equip purchase:
               equip barcodeID: "TRT02SSW",
               equip full retail price: 625,
               equip_type: "touring tandem",
               equip_class: "TRT",
               equip_condition: "insignificant cosmetic damage"
               },
        payment: "cash",
        sale_date: "2020-11-25",
        purchase_time: "2020-11-25T22:32:13Z",
        sale_equip:
               sale discount: 0.6,
               sale_subtotal: 375,
               sales_tax_interval: 1.0625,
               sale_grandtotal: 398,
               },
        rqstd_pickup_date: "2020-11-25"
        })
```

```
//Sales Receipt Collection, 2.1.4 #4
//Doc 1, Sales Receipt--
db.Sales Receipt.insertOne(
        sale_id: 00283,
        customer_info:
               cust id: 1000001,
               cust_fname: "Arayana",
               cust_Iname: "Janson",
               cust phone: 2695552222,
               cust_email: "arayana.a.janson@wmich.edu",
               cust address:
                       {
                               cust_street: "3713 West Main",
                               cust_city: "Kalamazoo",
                               cust state: "MI",
                               cust_zip: "49006"
                       }
               },
        sale_date: "2020-12-20",
        purchase time: "2020-12-20T09:34:21Z",
        equip info:
               equip_barcodeID: "TRT14SSW",
               equip_full_retail_price: 625,
               equip_type: "touring tandem",
                equip_class: "TRT",
               equip_condition: "insignificant cosmetic damage"
               },
        purchase_cost:
               subtotal: "equip purchase",
               tax:"0.06",
                total price: "purchase price * 0.06"
       })
//Doc 2, Sales_Receipt--
db.Sales_Receipt.insertOne({
        sale_id: 00299,
        customer_info:
               cust id: 1000546,
                cust fname: "Joe",
               cust_Iname: "Jupiter",
               cust phone: 2695592222,
               cust_email: "joe.jupiter@wmich.edu",
               cust_address:
                       cust_street: "3718 West Main",
                       cust_city: "Kalamazoo",
                       cust_state: "MI",
                       cust_zip: "49006"
                       }
```

```
},
       purchase date: "2020-11-25",
       purchase time: "2020-11-25T22:32:13Z",
       equip_info:
               equip_barcodeID: "TRT14SSW",
               equip full retail price: 625,
               equip type: "touring tandem",
               equip class: "TRT",
               equip condition: "insignificant cosmetic damage"
               },
       purchase cost:
               {
               subtotal: "equip purchase",
               tax:"0.06",
                total price: "purchase price * 0.06"
       })
//Purchase Order Collection //last two equipments have wrong type ("CBS")
//Doc 1, Purchase Order--
db.Purchase Order.insertOne({
       PO id: 00231,
       PO date: "2020-03-04",
       CBS_reorder_count: 1,
       TRT_reorder_count: 2,
       equipments ordered:
{equip barcodeID: "CBS26OBE", equipment type: "creekboat single", equip class: "CBS", equip full retail price: 450,
equip_condition: "new or like new", equip_status: "in stock"},
{equip_barcodeID: "TRT26OBE", equipment_type: "touring tandem", equip_class: "TRT", equip_full_retail_price: 625,
equip condition: "new or like new", equip status: "in stock"},
{equip barcodeID: "TRT270BE", equipment type: "touring tandem", equip class: "TRT", equip full retail price: 625,
equip condition: "new or like new", equip status: "in stock"}
               ],
       supplier_info:
               {
               supplierID: 000456,
               company: "Decathalon",
               person_of_contact: "Alyssa Davis",
               telephone: 269827462,
               email: "a.davis@decathalon.com",
               office number: 2694285769,
               address:
                       street: "6051 Constitution Blvd",
                       city: "Portage",
                       state: "MI",
                       zip: 49024
               }
       })
```

```
//Doc 2, Purchase Order--
db.Purchase Order.insertOne({
       PO id: 00232,
       PO_date: "2020-10-04",
       CBS reorder count: 0,
       TRT reorder count: 2,
       equipments ordered:
{equip barcodeID: "TRT28OBE", equipment type: "touring tandem", equip class: "TRT", equip full retail price: 625,
equip condition: "new or like new", equip status: "in stock"},
{equip barcodeID: "TRT29OBE", equipment type: "touring tandem", equip class: "TRT", equip full retail price: 625,
equip condition: "new or like new", equip status: "in stock"}
       supplier info:
               supplierID: 000199,
               company: "Sports Direct",
               person of contact: "Austin Lee",
               telephone: 2698334124,
               email: "a.lee@sportsdirect.com",
               office number: 2691239583,
               address:
                       street: "2923 W Michigan Ave",
                       city: "Kalamazoo",
                       state: "MI",
                        zip: 49006
               }
       })
//Process New Inventory Collection
//Doc 1, Process New Inventory--
db.Process New Inventory.insertOne(
       PO id: 00231,
        PO date: "2020-03-04",
       equipments ordered:
{equip barcodeID: "CBS26OBE", equipment_type: "creekboat single", equip_class: "CBS", equip_full_retail_price: 450,
equip_condition: "new or like new", equip_status: "in stock"},
{equip_barcodeID: "TRT26OBE", equipment_type: "touring tandem", equip_class: "CBS", equip_full_retail_price: 625,
equip condition: "new or like new", equip status: "in stock"},
{equip barcodeID: "TRT270BE", equipment type: "touring tandem", equip class: "CBS", equip full retail price: 625,
equip condition: "new or like new", equip status: "in stock"}
       inventory count CBS: 26,
       inventory_count_TRT: 26,
       })
//Doc 2, Process_New_Inventory--
db.Process_New_Inventory.insertOne(
       PO id: 00232,
       PO date: "2020-10-04",
```

4. Use Find() and Limit() functions and pretty() method to retrieve and display 2 documents from each collection. Copy-and-paste results on the report.

```
//Customer
   db.Customer.find().pretty().limit(2)
 Output Redirect to File
                 " id" : ObjectId("5fcc2b79768b233bb11ce2c4"),
                 "cust_id" : 1000001,
"cust_fname" : "Arayana",
                "cust_fname" : "Arayana",
"cust_lname" : "Janson",
"cust_phone" : 2695552222,
"cust_email" : "arayana.a.janson@wmich.edu",
"cust_address" : {
    "cust_street" : "3713 West Main",
    "cust_city" : "Kalamazoo",
    "cust_state" : "MI",
    "cust_zip" : 49006
}.
  10
  11
  12
13
               "cust_history" : "yes",
  14
15
                "cust_nistory": "yes",
"cust_rep": {
    "cust_history_value": "bad",
    "return_problem": "yes",
    "return_problem_details": {
        "return_id": 6794857,

  17
18
 19
20
                                "equipments_rented" : [
                                                 "equip_barcodeID" : "CBS03OBE",
"equipment_type" : "creekboat single",
"equip_class" : "CBS",
"equip_condition" : "insignificant cosmetic damage"
  22
 24
25
                                                 "equip_barcodeID" : "CBS04OBE",

"equipment_type" : "creekboat single",

"equip_class" : "CBS",

"equip_condition" : "insignificant cosmetic damage"
 29
30
  32
                                "return_date": "2020-03-18",
"checkin_date": "2020-03-19",
"deposit_amt_total": 130,
"amount_owed": 100,
  37
  38
  40
                                   "payment_method" : "cash",
"unreturned_equipment" : "no"
  41
  42
                         1
  45
                  " id" : ObjectId("5fcc2bfa768b233bb11ce2c5"),
                 "cust_id": 1000002,
"cust_fname": "Kimberly",
"cust_lname": "Chong",
"cust_phone": 2693332222,
  48
  49
  50
                  "cust_email" : "kimberly.chong@wmich.edu",
  52
                 "cust_address" : "kimperly.chongswmich.
"cust_address" : {
   "cust_street" : "3709 West Main",
   "cust_city" : "Kalamazoo",
   "cust_state" : "MI",
  53
  55
  56
  57
                         "cust_zip" : 49006
  59
                  "cust history" : "yes",
  60
                  "cust_rep" : "yes"
 61 }
```

```
//Deposit Retained
    db.Deposit_Retained.find().pretty().limit(2)
  Output Redirect to File
                       " id" : ObjectId("5fcc32b1768b233bb11ce2d0").
                     "cust_id": 1000001,
"return_id": 7895432,
"equipments_rented": [
    3
    6
                                          "equip_barcodeID" : "CBS09OBE",

"equipment_type" : "creekboat single",

"equip_class" : "CBS",

"equip_condition" : "insignificant cosmetic damage"
   12
  13
14
                                          "equip_barcodeID" : "CBS100BE",
"equipment_type" : "creekboat single",
"equip_class" : "CBS",
   15
  16
                                          "equip_condition" : "insignificant cosmetic damage"
                               1
  18
19
                     l,
"equip_return_problem": "none",
"checkout_date": "2020-11-28",
"return_date": "2020-11-29",
"checkin_date": "2020-11-30",
  20
                      "amount_owed" : 0,
"deposit_amt_total" : 30,
"returned_deposit" : 30,
  23
  25
  26
                      "payment_method" : "cash"
  27
  28
   29
                      " id" : ObjectId("5fcc32e2768b233bb11ce2d1"),
                     "cust_id": 1000002,
"return_id": 7895778,
  30
   31
                      "equipments_rented" : [
   32
  33
                                          "equip_barcodeID" : "TRT23SSW",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
   35
   36
                                          "equip_condition" : "new or like new"
   37
   38
                               },
  39
                                          "equip_barcodeID" : "TRT24SSW",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_condition" : "new or like new"
   41
   42
   43
   44
                               }
                     ]

"equip_return_problem" : "none",
"checkout_date" : "2020-12-13",
"return_date" : "2020-12-14",
"checkin_date" : "2020-12-14",
"amount_owed" : 0,
"deposit_amt_total" : 70,
"returned_deposit" : 70,
"payment_method" : "cash"
   46
   47
   48
49
  51
   52
  53
  54
//Equipment
   db.Equipment.find().pretty().limit(2)
  Output Redirect to File
                     "_id": ObjectId("5fcc2994768b233bb1lce"
"equip barcodeID": "CBS090BE",
"equip type": "creekboat single",
"equip class": "CBS",
"inventory count CBS": 25,
"equiptypeCBS count instock": 25,
"equip status": "in stock",
"storage_location": "OBE",
"equip_condition": "new or like new",
"equip_tull_retail_price": 450,
"equip_replace": "no",
"equip_rental_price_per_day": 50,
"equip_deposit_amt": 15
                           id" : ObjectId("5fcc2994768b233bb11ce2c2"),
    3
    4 5
   10
   11
  12
13
  14
15
   16
                    "_id": ObjectId("5fcc29d2768b233bb11ce2c3"),
    "equip_barcodeID": "CBS18OBE",
    "equip_type": "creekboat single",
    "equip_class": "CBS",
    "inventory_count_CBS": 25,
    "equiptypeCBS_count_instock": 25,
    "equip_status": "in stock",
    "storage_location": "SSW",
    "equip_condition": "new or like new",
    "equip_full_retail_price": 450,
    "equip_replace": "no",
    "equip_rental_price_per_day": 50,
    "equip_deposit_amt": 15
  17
18
   19
  20
  21
  22
23
  24
```

#### //Equipment Rental

1 db.Equipment\_Rental.find().pretty().limit(2)

#### Output Redirect to File " id" : ObjectId("5fcc2fc4768b233bb11ce2c8"), "reservation\_id": 1234567, "rental\_id": 5987654, "equipments\_rented": [ "equip barcodeID" : "CBS090BE", "equipment\_type" : "creekboat single", "equip\_class" : "CBS", "equip\_condition": "insignificant cosmetic damage", "same\_day": "yes", "storage\_location": "OBE", "equip\_status" : "rented", "equip\_rental\_price\_per\_day" : 50, "equip\_deposit\_amt" : 15 16 "equip\_barcodeID" : "CBS090BE", "equipment\_type" : "creekboat single", "equip\_class" : "CBS", "equip\_condition" : "insignificant cosmetic damage", "same\_day" : "yes", "storage\_location" : "OBE", "equip\_status" : "rented", "equip\_rental\_price\_per\_day" : 50, "equip\_deposit\_amt" : 15 28 } l, "rqstd\_pickup\_date": "2020-11-28", "rqstd\_return\_date": "2020-11-29", "checkout\_date": "2020-11-28", "return\_date": "2020-11-28", "equiptypeCBS\_count\_instock": 23, "total\_deposit\_amt": 30, "deposit\_increase\_interval": 1.25, "cust\_omer info": { "cust\_id": 1000001, "cust\_fname": "Arayana", "cust\_lname": "Janson", "cust\_phone": 2695552222, "cust\_email": "arayana.a.janson@wmich.edu", "cust\_address": { 35 42 "cust\_address": "arayana.a.janson@wmic "cust\_address": "3713 West Main", "cust\_city": "Kalamazoo", "cust\_state": "MI", "cust\_zip": 49006 45 47 cust\_history" : "yes", "cust\_rep": { "cust\_history value": "bad", "return problem": "yes", "return problem\_details": { "return\_id": 6794857, 50 52 55 "equipments\_rented" : [ { "equip\_barcodeID" : "CBS030BE", "equipment\_type" : "creekboat single", "equip\_class" : "CBS", "equip\_condition" : "insignificant cosmetic dam 57 59 }, "equip\_barcodeID" : "CBS040BE", "equipment type": "creekboat single", "equip class": "CBS", "equip\_condition": "insignificant cosmetic dam 64 } ], "equip\_return\_problem": "late return", "rental\_date": "2020-03-17", "checkout\_date": "2020-03-18", "return\_date": "2020-03-19", 71

```
"deposit_amt_total": 130,
"amount_owed": 100,
"payment_method": "cash",
"unreturned_equipment": "no"
   74
75
76
   77
78
79
80
                                      }
                           "amt_owed_resolved" : "yes",
"equip_total_rental_price_per_day" : 100,
"number_days_renting" : 1,
"payment_method" : "cash"
    81
   82
    83
   84
    86
                            " id" : ObjectId("5fcc3016768b233bb11ce2c9"),
                           "reservation_id": 1235678,
"rental_id": 5987782,
"equipments_rented": [
   87
88
   89
90
                                                    "equip_barcodeID" : "TRT23SSW",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_condition" : "new or like new",
"same_day" : "no",
"storage_location" : "SSW",
"equip_status" : "rented",
"equip_rental_price_per_day" : 125,
"equip_deposit_amt" : 35
   91
    93
   94
95
   96
97
    98
   99
  100
                                       1.
 101
                                                     "equip_barcodeID": "TRT24SSW",

"equipment_type": "touring tandem",

"equip_class": "TRT",

"equip_condition": "new or like new",

"same_day": "no",

"storage_location": "SSW",

"equip_status": "rented",

"equip_rental_price_per_day": 125,

"equip_deposit_amt": 35
 102
  103
 104
 105
 106
 107
 108
 110
 111
 112
                             "rqstd_pickup_date" : "2020-12-13",
"rqstd_return_date" : "2020-12-14",
"checkout_date" : "2020-12-14",
"return_date" : "2020-12-14",
"equiptypeCBS_count_instock" : 22,
"total_deposit_amt" : 70,
"deposit_increase_interval" : 1.25,
 113
 114
 115
 116
 117
 118
 119
                            "deposit_increase_interval" : 1.25,
"cust_info" : {
    "cust_id" : 1000002,
    "cust_fname" : "Kimberly",
    "cust_lname" : "Chong",
    "cust_phone" : 2693332222,
    "cust_email" : "kimberly.chong@wmich.edu",
    "cust_address" : {
        "cust_street" : "3709 West Main",
        "cust_city" : "Kalamazoo",
        "cust_state" : "MI",
        "cust_zip" : 49006
},
 120
  121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
                                           "cust_history" : "yes",
"cust_rep" : {
 133
                                                        "cust_history_value" : "good",
"return_problem" : "no"
 134
 135
 137
                              "equip total rental price per day" : 250,
"number days renting" : 1,
"payment method" : "cash"
 138
 139
 140
141 }
```

#### //Equipment\_Reservation

db.Equipment\_Reservation.find().pretty().limit(2)

#### Output Redirect to File

```
id" : ObjectId("5fcc2dac768b233bb11ce2c6"),
                     "cust_info" : {
    "cust_id" : 1000001,
                               "cust_id": 1000001,
"cust_fname": "Arayana",
"cust_lname": "Janson",
"cust_phone": 2695552222,
"cust_email": "arayana.a.janson@wmich.edu",
"cust_address": {
    "cust_street": "3713 West Main",
    "cust_city": "Kalamazoo",
    "cust_zin": 49006
10
11
12
13
                                            "cust_zip" : 49006
14
                               "cust_history" : "yes",
"cust_rep" : {
    "cust_history value" : "bad",
    "return_problem" : "yes",
    "return_problem_details" : {
        "return_id" : 6794857,
        "equipments_repted" : [
16
17
19
21
                                                        "equipments rented" : [
22
23
                                                                              "equip_barcodeID" : "CBS030BE",
                                                                              "equipment_type": "creekboat single",
"equip_class": "CBS",
"equip_condition": "insignificant cosmetic dam
24
25
26
27
28
                                                                              "equip_barcodeID" : "CBS040BE",
"equipment_type" : "creekboat single",
"equip_class" : "CBS",
29
30
31
                                                                              "equip_condition" : "insignificant cosmetic dam
32
33
                                                                 }
34
35
                                                       ],
"equip_return_problem": "late_return",
"rental_date": "2020-03-17",
"checkout_date": "2020-03-17",
"return_date": "2020-03-18",
"checkin_date": "2020-03-19",
"deposit_amt_total": 130,
"amount_owed": 100,
"payment_method": "cash",
"unreturned_equipment": "no"
36
38
39
 40
 41
 42
43
                                                           "unreturned_equipment" : "no"
 44
                                              3
 45
                                 }
46
                       "reservation_id": 1234567,
"reservation_date": "2020-11-28",
"equipments_reserved": [
 47
 48
 49
50
                                              "equip_barcodeID" : "CBS090BE",
"equipment_type" : "creekboat single",
"equip_class" : "CBS",
"equip_condition" : "insignificant cosmetic damage",
"same_day" : "yes",
"storage_location" : "OBE",
"equip_status" : "in stock",
"equip_tatus" : "in stock",
"equip_mental_price_per_day" : 50,
"equip_deposit_amt" : 15
51
52
53
54
55
56
57
58
 59
 60
 61
                                              "equip_barcodeID" : "CBS100BE",
"equipment_type" : "creekboat single",
"equip_class" : "CBS",
"equip_condition" : "insignificant cosmetic damage",
"same_day" : "yes",
"storage_location" : "OBE",
"equip_status" : "in stock",
"equip_rental_price_per_day" : 50,
"equip_deposit_amt" : 15
 62
 63
 64
 65
 66
 67
 68
69
 70
71
72
```

```
73
74
                       "equiptypeCBS_count_instock" : 25,
                       "rqstd_pickup_date": "2020-11-28",
"rqstd_return_date": "2020-11-29",
   75
                      "rqstd_return_date" : "2020-11-29
"total_deposit_amt" : 30,
"equip_available" : "yes",
"email_availability" : {
    "equip_available" : "yes",
    "cust_info" : {
        "cust_id" : 1000001,
        "cust_fname" : "Arayana",
        "cust_lname" : "Janson",
        "cust_phone" : 269552222
   77
78
   79
   80
   81
   82
   83
                                            "cust_lname": "Janson",
"cust_phone": 2695552222,
"cust_email": "arayana.a.janson@wmich.edu",
"cust_address": {
    "cust_street": "3713 West Main",
    "cust_city": "Kalamazoo",
    "cust_state": "MI",
    "cust_zip": 49006
   84
   85
   86
   88
   89
   90
   91
   92
                                }
   93
   94
                       "equip_total_rental_price_per_day" : 100,
"payment_method" : "cash"
   95
   96
   97
   98
                      "_id" : ObjectId("5fcc2ed0768b233bb11ce2c7"),
"cust_info" : {
    "cust_id" : 1000002,
    "cust_fname" : "Kimberly",
    "cust_lname" : "Chong",
    "cust_phone" : 2693332222,
    "cust_email" : "kimberly.chong@wmich.edu",
    "cust_address" : {
        "cust_street" : "3709 West Main",
        "cust_city" : "Kalamazoo",
        "cust_state" : "MI",
        "cust_zip" : 49006
}.
                       " id" : ObjectId("5fcc2ed0768b233bb11ce2c7").
   99
100
 101
103
104
105
 106
107
108
110
111
                                   "cust_history" : "yes",
                                   "cust_rep" : {
    "cust_history_value" : "good",
113
114
                                             "return_problem" : "no"
 115
                                 }
116
                       "reservation_id": 1235678,
"reservation_date": "2020-12-05",
"equipments_reserved": [
 117
118
 119
 120
                                             "equip_barcodeID" : "TRT23SSW",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_condition" : "new or like new",
121
122
124
                                             "same day": "no",
"storage_location": "SSW",
"equip_status": "in stock",
125
 126
 127
                                             "equip rental price per day" : 125,
"equip deposit amt" : 35
128
129
 130
 131
132
                                             "equip_barcodeID" : "TRT24SSW",
                                             "equipment_type" : "touring tandem",
"equip class" : "TRT",
"equip_condition" : "new or like new",
133
 134
135
                                             "same_day": "no",
"storage_location": "SSW",
"equip_status": "in stock",
136
137
                                             "equip_rental_price_per_day" : 125,
"equip_deposit_amt" : 35
139
140
141
                     "equiptypeCBS_count_instock": 24,
"rqstd_pickup_date": "2020-12-13",
"rqstd_return_date": "2020-12-14",
"total_deposit_amt": 70,
"equip_available": "yes",
"email_availablity": {
""availa_available": "yes",
143
144
145
 146
147
148
                                 ail_availability" {
    "equip_available" : "yes",
    "cust_info" : {
        "cust_inf" : 1000002,
        "cust_fname" : "Kimberly",
        "cust_lname" : "Chong",
        "cust_phone" : 2693332222,
        "cust_email" : "kimberly.chong@wmich.edu",
        "cust_address" : {
        "cust_street" : "3709 West Main",
        "cust_otiy" : "Kalamazoo",
        "cust_state" : "MI",
        "cust_zip" : 49006
149
151
152
153
155
156
157
 158
159
160
                                                        "cust_zip" : 49006
 161
                                            }
162
                               }
163
164
                       "same_day" : "no",
                       "equip_total_rental_price_per_day" : 250,
"payment_method" : "cash"
165
166
167 }
```

//Equipment\_Return

```
1 db.Equipment_Return.find().pretty().limit(2)
```

```
Output Redirect to File
                  " id" : ObjectId("5fcc31f8768b233bb11ce2ce"),
                 "cust id" : 1000001,
                "cust_id": 1000001,
"reservation_id": 1234567,
"rental_id": 5437682,
"return_id": 7895432,
"return_timestamp": "2020-11-29T09:17:092",
                "resturn_timestamp": "2020-11-29109
"rqstd_pickup_date": "2020-11-28",
"rqstd_return_date": "2020-11-29",
"checkout_date": "2020-11-30",
"checkin_date": "2020-11-30",
    8
  10
  11
  12
                "checkin_date": "2020-11-30",
"actual_return_time": "ontime",
"rental_amts": {
    "equip_total_rental_price_per_day": 100,
    "total_deposit_amt": 30,
    "rental_tax": 0.06,
    "rental_grand_total": 136
  13
  14
  15
  16
  17
  18
  19
  20
                 "equip_inspection" : "undamaged",
"degree_of_damage" : 0,
"late_fee" : {
  21
  22
 23
24
                         "actual_return_time" : "ontime",
                        "days_late" : 0,
"rental_total" : 100
  25
  26
  27
                 "damage_fee" : {
  28
                        "equip_inspection": "good",
"deposit_damage_portion": 0,
"deposit_damage_retained": 0
  29
  30
  31
  32
                 "deposit_retained" : {
                        "late_fee" : 0,
"damage_fee" : 0
  33
  34
  35
  36
                 "equipments_returned" : [
  37
  38
                                 "equip_barcodeID" : "CBS090BE",
                                 "equipment_type" : "creekboat single", "equip_class" : "CBS",
  39
  40
  41
                                 "equip condition" : "insignificant cosmetic damage",
                                "equip_condition": "insignificant
"same_day": "yes",
"storage_location": "OBE",
"equip_status": "in stock",
"equip_rental_price_per_day": 50,
"equip_deposit_amt": 15
  42
  43
  45
  46
  47
                        },
  48
  49
                                 "equip_barcodeID" : "CBS090BE",
                                 "equipment_type" : "creekboat single",
"equip_class" : "CBS",
  50
  51
                                "equip_class" : "CBS",
"equip_condition" : "insignificant cosmetic damage",
"same_day" : "yes",
"storage_location" : "OBE",
"equip_status" : "instock",
"equip_rental_price_per_day" : 50,
"equip_deposit_amt" : 15
  52
  53
  54
  56
  57
  58
                        }
  59
                "cust_history_updated" : {
  60
                        "cust_history" : "yes",
"cust_rep" : "no",
"equip_condition" : "already inventoried damage"
  61
  62
  63
  64
  65
  66
  67
                 "_id" : ObjectId("5fcc3257768b233bb11ce2cf"),
                "cust_id": 1000002,
"reservation_id": 1235678,
"rental_id": 5987782,
"return_id": 7895778,
  68
  69
  70
  71
                 "return_timestamp" : "2020-12-14T07:23:34Z",
 72
```

```
"rqstd_pickup_date": "2020-12-13",
"rqstd_return_date": "2020-12-14",
"checkout_date": "2020-12-14",
"return_date": "2020-12-14",
"checkin_date": "2020-12-14",
"actual_return_time": "ontime",
"rental_amts": {
  74
75
76
   77
  78
79
   80
                                   "equip total rental price per day": 250,
"total deposit amt": 70,
"rental tax": 0.06,
"rental grand total": 335
   82
   83
                      "rental_yss..." "undamaged",
"equip_inspection" : "undamaged",
"degree_of_damage" : 0,
"late_fee" : {
    "actual_return_time" : "ontime",
    "days_late" : 0,
    "rental_total" : 320
   84
   85
   86
   87
   88
   89
   90
   91
                         "damage fee" : {
   93
                                    "equip inspection" : "good",
                                    "deposit_damage_portion" : 0,
"deposit_damage_retained" : 0
   94
   95
   96
  97
98
                         "deposit_retained" : {
                                    "late_fee" : 0,
"damage_fee" : 0
   99
 100
101
                         "equipments_returned" : [
102
                                              "equip_barcodeID" : "TRT23SSW",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_condition" : "new or like new",
"same_day" : "no",
"storage_location" : "SSW",
"equip_status" : "in stock",
"equip_rental_price_per_day" : 125,
"equip_deposit_amt" : 35
104
105
 106
107
108
109
110
 111
112
113
                                              "equip_barcodeID" : "TRT24SSW",

"equipment_type" : "touring tandem",

"equip_class" : "TRT",

"equip_condition" : "new or like new",

"same_day" : "no",

"storage_location" : "SSW",

"equip_status" : "in stock",

"equip_rental_price_per_day" : 125,

"equip_deposit_amt" : 35
114
 115
116
117
118
 119
120
121
 122
123
124
                        "cust_history_updated" : {
    "cust_history" : "yes",
    "cust_rep" : "no",
    "equip_condition" : "already inventoried damage"
125
 126
127
128
129
130 }
```

//Equipment\_Sale

```
db.Equipment_Sale.find().pretty().limit(2)
```

```
Output Redirect to File
                       " id" : ObjectId("5fcc3337768b233bb11ce2d2"),
   3
                      "sale_id" : 283,
"customer_info" : {
                                  "cust_id" : 1000001,
"cust_fname" : "Arayana",
"cust_lname" : "Janson",
  5
                                 "cust_lname": "Janson",
"cust_phone": 2695552222,
"cust_email": "arayana.a.janson@wmich.edu",
"cust_address": {
    "cust_street": "3713 West Main",
    "cust_city": "Kalamazoo",
    "cust_state": "MI",
    "cust_zip": "49006"
  8
 10
 11
12
 13
15
16
                      },
"equip_purchase" : {
    "equip_barcodeID" : "TRT14SSW",
    "equip_full_retail_price" : 625,
    "equip_type" : "touring tandem",
    "equip_class" : "TRT",
    "equip_condition" : "insignificant cosmetic damage"
 17
18
 19
20
21
22
23
24
                      "sale_discount": 0.6,
"sale_subtotal": 375,
"sales_tax_interval": 1.0625,
26
27
                     "sale_grandtotal" : 398,

"sale_date" : "2020-12-20",

"purchase_time" : "2020-12-20T09:34:21Z",

"payment_method" : "cash",

"sale_status" : "sold",

"equip_status" : "sold",

"equip_class" : "OOI",
                      "sale_grandtotal" : 398,
28
30
 31
 32
 33
                      "equiptypeTRT_count_instock": 24,
"rqstd_pickup_date": "2020-12-20"
34
 35
                  "_id" : ObjectId("5fcc3370/0002200"
"sale_id" : 299,
"customer_info" : {
    "cust_id" : 1000546,
    "cust_fname" : "Joe",
    "cust_lname" : "Jupiter",
    "cust_phone" : 2695592222,
    "cust_email" : "joe.jupiter@wmich.edu",
    "cust_address" : {
        "cust_address" : "3718 West Main",
        "cust_city" : "Kalamazoo",
        "cust_state" : "MI",
        "cust_zip" : "49006"
}
 38
                       "_id" : ObjectId("5fcc337d768b233bb11ce2d3"),
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
52
 53
                      "equip_purchase" : {
    "equip_barcodeID" : "TRT02SSW",
                                 "equip_barcodelD": "LKIUSSW",
"equip_full_retail_price": 625,
"equip_type": "touring tandem",
"equip_class": "TRT",
"equip_condition": "insignificant cosmetic damage"
 55
56
 57
 58
 59
 60
                       "sale_discount" : 0.6,
                      "sale_subtotal": 375,
"sales_tax_interval": 1.0625,
 61
 62
                     "sales_tax_interval": 1.0625,
"sale_grandtotal": 398,
"sale_date": "2020-11-25",
"purchase_time": "2020-11-25T22:32:13Z",
"payment_method": "cash",
"sale_status": "sold",
"equip_status": "sold",
"equip_class": "00I",
"equiptypeTRT_count_instock": 23,
"rqstd_pickup_date": "2020-11-25"
 63
 64
 66
 67
 68
 69
70
 71
```

```
//Problem With Return
  db.Problem_With_Return.find().pretty().limit(2)
 Output Redirect to File
                   id" : ObjectId("5fcc3088768b233bb11ce2ca"),
                "cust_id": 1000001,
"return_id": 6794857,
   3
   5
                 "equipments_rented" : [
                                 "equip barcodeID" : "CBS030BE",
   8
                                 "equipment_type" : "creekboat single",
"equip_class" : "CBS",
"equip_condition" : "insignificant cosmetic damage"
  10
  11
 12
                                 "equip_barcodeID" : "CBS040BE",
 13
                                 "equipment_type": "creekboat single",
"equip_class": "CBS",
"equip_condition": "insignificant cosmetic damage"
 14
 15
 16
                        }
 18
 19
                 "equip_return_problem" : "late return",
                "equip return problem": "late
"rental date": "2020-03-17",
"checkout date": "2020-03-18",
"return date": "2020-03-18",
"checkin date": "2020-03-19",
 20
 22
 23
 24
                 "amount_owed" : 100
 25
 26
 27
                "_id" : ObjectId("5fcc30ca768b233bb11ce2cb"),
                "cust_id" : 1000500,
"return_id" : 5432123,
 28
 29
 30
                "equipments_rented" : [
 31
                                 "equip_barcodeID" : "CBS070BE",
                                 "equipment_type" : "creekboat single",
"equip_class" : "CBS",
"equip_condition" : "insignificant cosmetic damage"
  33
 34
 35
                                 "equip_barcodeID" : "TRT040BE",

"equipment_type" : "touring tandem",

"equip_class" : "TRT",

"equip_condition" : "new or like new"
 38
 39
 40
  42
                        }
 43
                "equip_return_problem": "late return",
"rental_date": "2020-04-22",
"checkout_date": "2020-04-22",
  45
 46
                "return date": "2020-04-23",
"checkin date": "2020-04-24",
"amount_owed": 175
 47
  48
 50 }
//Process_New_Inventory
   db.Process_New_Inventory.find().pretty().limit(2)
Output Redirect to File
                id" : ObjectId("5fcc3813768b233bb11ce2da"),
             "PO_id": 153,
"PO_date": "2020-03-04",
"equipments_ordered": [
                         "equip barcodeID": "CBS260BE",
"equipment type": "creekboat single",
"equip class": "CBS",
"equip full retail price": 450,
"equip condition": "new or like new",
"equip_status": "in stock"
"equip_barcodeID" : "TRT260BE",
                          "equip_narcodelD": "TRIZEOBE",
"equipment type": "Couring tandem",
"equip_class": "CBS",
"equip_condition": "new or like new",
"equip_ondition": "new or like new",
"equip_otatus": "in stock"
                         "equip barcodeID": "TRT270BE",
"equipment type": "touring tandem",
"equip class": "CBS",
"equip full retail price": 625,
"equip_condition": "new or like new",
"equip_status": "in stock"
                  }
             ],
"inventory_count_CBS" : 26,
"inventory_count_TRT" : 26
             "_id" : ObjectId("5fcc38c0769b233bb11ce2db"),
"PO id" : 154,
```

```
"PO date" : "2020-10-04",
38
                    "equipments_ordered" : [
39
                                         "equip_barcodeID" : "TRT280BE",
"equipment_type" : "touring tandem",
"equip_class" : "CBS",
"equip_full_retail_price" : 625,
"equip_condition" : "new or like new",
"equip_status" : "in stock"
 40
 41
 42
 43
 45
 46
 47
                                         "equip_barcodeID" : "TRT290BE",
"equipment_type" : "touring tandem",
"equip_class" : "CBS",
"equip_full_retail_price" : 625,
"equip_condition" : "new or like new",
"equip_status" : "in stock"
 48
 49
50
 51
 52
 53
54
                             }
                    "inventory_count_CBS" : 27,
"inventory_count_TRT" : 25
56
57
58 }
```

### //Purchase Order

db.Purchase\_Order.find().pretty().limit(2)

#### Output Redirect to File

```
" id" : ObjectId("5fcc36ef768b233bb11ce2d8"),
                   "_Ia": ObjectId("SICC36e"
"PO_id": 153,
"PO date": "2020-03-04",
"CBS_reorder_count": 1,
"TRT_reorder_count": 2,
   6 7 8
                    "equipments_ordered" : [
                            {
                                      "equip_barcodeID" : "CBS260BE",
    9
  10
11
                                     "equipment_type" : "creekboat single",
"equip_class" : "CBS",
                                     "equip_class": "Cbs",
"equip_tull_retail_price": 450,
"equip_condition": "new or like new",
"equip_status": "in stock"
  12
  13
  14
15
  16
  17
                                      "equip_barcodeID" : "TRT260BE",
                                     "equip_marcodelD": "IKIZOUSE",
"equipment_type": "touring tandem",
"equip_class": "CBS",
"equip_full_retail_price": 625,
"equip_condition": "new or like new",
"equip_status": "in stock"
  18
  19
  20
  21
  23
                            },
  24
                                     "equip_barcodeID" : "TRT270BE",
"equipment_type" : "touring tandem",
"equip_class" : "CBS",
"equip_full_retail_price" : 625,
"equip_condition" : "new or like new",
"equip_status" : "in stock"
  25
26
  27
  28
29
  30
  31
                            }
  32
                    "supplier_info" : {
    "supplierID" : 302,
    "company" : "Decathalon",
  33
  34
36
                            "person of contact" : "Alyssa Davis",
```

```
"telephone": 269827462,
"email": "a.davis@decathalon.com",
38
                              "office number" : 2694285769,
39
                             "address": {
    "street": "6051 Constitution Blvd",
    "city": "Portage",
    "state": "MI",
40
41
42
43
44
                                       "zip" : 49024
45
                            }
47
48
                   "_id" : ObjectId("5fcc378b768b233bb11ce2d9"),
"PO_id" : 154,
"PO_date" : "2020-10-04",
49
51
                   "CBS_reorder_count" : 0,
"TRT_reorder_count" : 2,
"equipments_ordered" : [
53
54
55
                                       "equip_barcodeID" : "TRT280BE",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_full_retail_price" : 625,
"equip_condition" : "new or like new",
"equip_status" : "in stock"
56
58
59
60
62
63
                                       "equip_barcodeID" : "TRT290BE",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_full_retail_price" : 625,
"equip_condition" : "new or like new",
"equip_status" : "in stock"
64
66
67
68
69
70
71
                    "supplier_info" : {
    "supplierID" : 199,
    "company" : "Sports Direct",
    "person_of_contact" : "Austin Lee",
    "telephone" : 2698334124,
73
74
76
77
                             "email" : "a.lee@sportsdirect.com",
                             "office_number": 2691239583,
"address": {
    "street": "2923 W Michigan Ave",
    "city": "Kalamazoo",
    "state": "MI",
    "zip": 49006
78
80
81
82
83
84
85
86
        }
```

#### //Rental Agreement

db.Rental Agreement.find().pretty().limit(2)

```
Output Redirect to File
```

```
"_id" : ObjectId("5fcc31lb768b233bb11ce2cc"),
"Header_Section" : {
    "rental_id" : 5437682,
    "checkout_date" : "2020-11-28",
    "return_date" : "2020-11-29",
    "customer_info" : {
        "cust_id" : 1000001,
        "cust_fname" : "Arayana",
        "cust_lname" : "Janson",
        "cust_phone" : 2695552222,
        "cust_email" : "arayana.a.janson@wmich.edu",
        "cust_address" : {
        "cust_street" : "3713 West Main",
        "cust_state" : "MI",
        "cust_zip" : "49006"
    }
}
                    "_id" : ObjectId("5fcc311b768b233bb11ce2cc"),
10
11
12
13
14
15
16
17
18
                                       }
19
                            }
20
21
                    "Detail_Section" : {
22
                              "equipments_rented" : [
23
24
                                                   "equip barcodeID" : "CBS090BE",
25
                                                  "equipment_type" : "creekboat single", 
"equip_class" : "CBS",
26
                                                  "equip condition": "insignificant cosmetic damage",
"equip rental price per day": 50,
"equip deposit amt": 15
27
28
29
30
                                       },
31
                                                  "equip_barcodeID" : "CBS100BE",
"equipment_type" : "creekboat single",
"equip_class" : "CBS",
"equip_condition" : "insignificant cosmetic damage",
32
33
34
35
36
                                                  "equip rental price per day" : 50,
```

```
"equip_deposit_amt" : 15
  38
                                        }
  39
  40
                                 "total_deposit_amt" : 30,
                                "equip_total_rental_price_per_day" : 100,
"rental_tax" : 0.06,
"rental_total" : 106
   41
   42
  43
   44
                      },
"Footer Section" : {
                               "rental_subtotal": 100,
"deposit_subtotal": 30,
"rental_tax": 0.06,
"rental_grand_total": 136
  46
   47
   48
   49
  50
  51
  52
           {
  53
                      " id" : ObjectId("5fcc3170768b233bb11ce2cd"),
                     "Header_Section" : {
    "rental_id" : 5987782,
    "checkout_date" : "2020-12-13",
    "return_date" : "2020-12-14",
  54
55
   56
  57
                               "return_date" : "2020-12-14",
"cust_info" : {
    "cust_id" : 1000002,
    "cust_fname" : "Kimberly",
    "cust_lname" : "Chong",
    "cust_phone" : 2693332222,
    "cust_email" : "kimberly.chong@wmich.edu",
    "cust_address" : {
        "cust_street" : "3709 West Main",
        "cust_city" : "Kalamazoo",
        "cust_state" : "MI",
        "cust_zip" : 49006
}
  58
  59
   60
   61
   62
   63
   64
   65
  66
   68
   69
                                         }
   70
                              }
   71
                     },
"Detail Section" : {
    "equipments_rented" : [
  72
73
  74
75
                                                    "equip_barcodeID" : "TRT23SSW",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_condition" : "new or like new",
   76
  77
78
79
                                                    "same_day": "no",
"equip_rental_price_per_day": 125,
"equip_deposit_amt": 35
  80
  81
  82
  83
                                                   "equip_barcodeID" : "TRT24SSW",
"equipment_type" : "touring tandem",
"equip_class" : "TRT",
"equip_condition" : "new or like new",
"same_day" : "no",
"equip_rental_price_per_day" : 125,
"equip_deposit_amt" : 35
  85
  86
  87
  88
  89
  90
  91
                                         }
   92
                                "total_deposit_amt": 70,
"equip_total_rental_price_per_day": 250,
"rental_tax": 0.06,
"rental_total": 265
  93
  94
   95
  96
  97
                     "Footer_Section" : {
    "equip_total_rental_price_per_day" : 250,
    "total_deposit_amt" : 70,
    "rental_tax" : 0.06,
    "rental_grand_total" : 335
  98
  99
100
101
102
103
104 }
```

//Sales\_Payment

```
db.Sales_Payment.find().pretty().limit(2)
```

```
Output Redirect to File
                   "_id" : ObjectId("5fcc33d8768b233bb11ce2d4"),
                  "sale_id": 283,
"customer info": {
    "cust_id": 1000001,
    "cust_fname": "Arayana",
    "cust_lname": "Janson",
  5
                            "cust_lname" : "Janson",
"cust_phone" : 2695552222,
"cust_email" : "arayana.a.janson@wmich.edu",
"cust_address" : {
    "cust_street" : "3713 West Main",
    "cust_city" : "Kalamazoo",
    "cust_state" : "MI",
    "cust_zip" : "49006"
  8
10
11
12
13
14
15
                            }
16
                  },
"equip_purchase" : {
    "equip_barcodeID" : "TRT14SSW",
    "equip_full_retail_price" : 625,
    "equip_type" : "touring tandem",
    "equip_class" : "TRT",
    "equip_condition" : "insignificant cosmetic damage"
17
18
19
20
21
22
23
                  "payment": "cash",
"sale_date": "2020-12-20",
"purchase_time": "2020-12-20T09:34:212",
24
25
27
28
                   "sale_equip" : {
                           "sale_discount": 0.6,
"sale_subtotal": 375,
"sales_tax_interval": 1.0625,
29
30
31
                            "sale_grandtotal" : 398
32
33
                   "rqstd_pickup_date" : "2020-12-20"
34
35
36
                   "_id" : ObjectId("5fcc34ae768b233bb11ce2d5"),
"sale_id" : 299,
"customer_info" : {
37
                           stomer_info" : {
  "cust_id" : 1000546,
  "cust_fname" : "Joe",
  "cust_lname" : "Jupiter",
  "cust_phone" : 2695592222,
  "cust_email" : "joe.jupiter@wmich.edu",
  "cust_address" : {
    "cust_street" : "3718 West Main",
    "cust_city" : "Kalamazoo",
    "cust_state" : "MI",
    "cust_zip" : "49006"
}
38
39
40
41
42
43
45
46
47
49
                           }
50
51
                   "equip_purchase" : {
                           ulp_purchase" : {
  "equip_barcodeID" : "TRT02SSW",
  "equip_full_retail_price" : 625,
  "equip_type" : "touring tandem",
  "equip_class" : "TRT",
  "equip_condition" : "insignificant cosmetic damage"
52
53
54
55
56
57
58
                   "payment" : "cash",
"sale_date" : "2020-11-25",
"purchase_time" : "2020-11-25T22:32:132",
59
60
61
                   "sale_equip" : {
                            "sale_discount": 0.6,
"sale_subtotal": 375,
"sales_tax_interval": 1.0625,
62
63
64
65
                            "sale_grandtotal" : 398
66
                   "rqstd_pickup_date" : "2020-11-25"
68
```

//Sales\_Receipt

```
1 db.Sales_Receipt.find().pretty().limit(2)
```

```
Output Redirect to File
                     " id" : ObjectId("5fcc3528768b233bb11ce2d6"),
                    "sale_id" : 283,
"customer info" : {
    "cust_id" : 1000001,
    "cust_fname" : "Arayana",
    "cust_lname" : "Janson",
   4 5
                              "cust_lname": "Janson",
"cust_phone": 2695552222,
"cust_email": "arayana.a.janson@wmich.edu",
"cust_address": {
    "cust_street": "3713 West Main",
    "cust_city": "Kalamazoo",
    "cust_state": "MI",
    "cust_zip": "49006"
   8
 10
 11
 12
13
 14
 15
                             }
16
 17
                     "sale_date": "2020-12-20",
"purchase_time": "2020-12-20T09:34:212",
 18
 19
                     "equip info" : {
                              "ip_into": {
  "equip_barcodeID": "TRT14SSW",
  "equip_full retail price": 625,
  "equip_type": "touring tandem",
  "equip_class": "TRT",
20
 21
 22
23
24
                               "equip_condition" : "insignificant cosmetic damage"
 25
                     "purchase_cost" : {
    "subtotal" : "equip_purchase",
    "tax" : "0.06",
    "total_price" : "purchase_price * 0.06"
26
27
28
 30
 31
 32
          {
 33
                    " id" : ObjectId("5fcc3570768b233bb11ce2d7"),
 34
                     "sale_id" : 299,
                             stomer_info" : {
  "cust_id" : 1000546.
  "cust fname" : "Joe",
  "cust lname" : "Jupiter",
  "cust phone" : 2695592222,
  "cust email" : "joe.jupiter@wmich.edu",
  "cust_address" : {
    "cust_atreet" : "3718 West Main",
    "cust_city" : "Kalamazoo",
    "cust state" : "MI",
    "cust_zip" : "49006"
}
 35
                     "customer_info" : {
36
 38
 39
 40
 41
 42
 43
 44
 45
 46
                             }
 47
                    },
"purchase_date": "2020-11-25",
"purchase time": "2020-11-25T22:32:13Z",
"equip_info": {
    "equip_barcodeID": "TRT14SSW",
    "equip_full_retail_price": 625,
    "equip_type": "touring tandem",
    "equip_class": "TRT",
    "equip_condition": "insignificant cosmetic damage"
 48
 49
 50
 51
 52
 53
 54
 55
 56
                     purchase_cost" : {
    "subtotal" : "equip_purchase",
    "tax" : "0.06",
    "total_price" : "purchase_price * 0.06"
 58
 59
 60
62 }
```