



Sri Lanka Institute of Information Technology

B.Sc. Honors Degree in Information Technology

Specialized in Software Engineering

Final Examination
Year 3, Semester 1 (2021)

SE3040 – Application Frameworks

Final Paper Report

Student ID number: IT18217278


Name: Usgalhewa S.S.

For Evaluations:

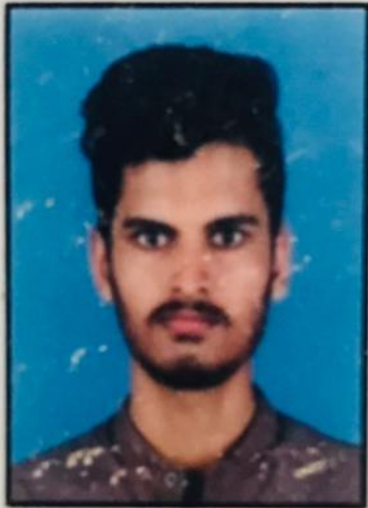
Marks Allocation	Marks
Implementation of User Interfaces - 24 marks	
Implementation of service endpoints. - 30 marks	
Implementation of the calculation service. - 24 marks	
Suitable technology selection (Student will be eligible for this mark if only he/she select the correct technologies for the different parts of the application). - 10 marks	
At least one-unit test for either part of the application (UI/ services). - 5 marks	
Styling of the UI. - 2 marks.	
Coding standards and quality- 5 marks	

Comments:

Photograph of the Student ID

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STUDENT ID

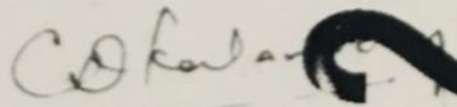


Usgalhewa S.S.

Reg. No. IT 18 **2172** 78


NIC No: 972540579V

Date of Issue: 08-06-2018


Director / Administration

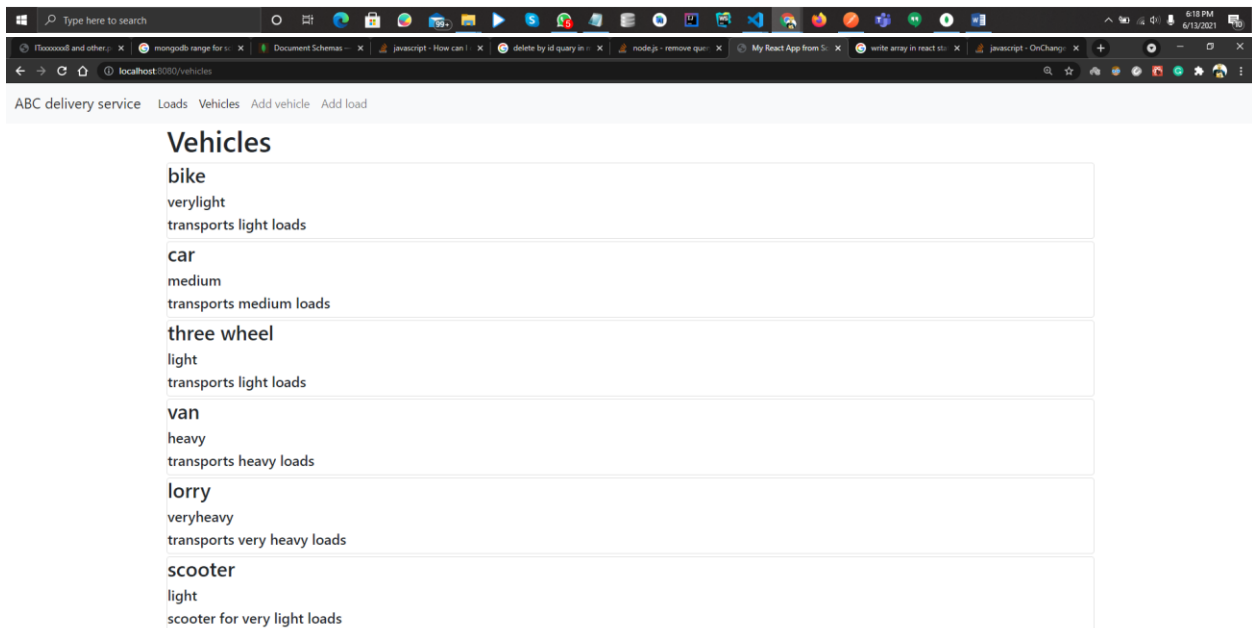
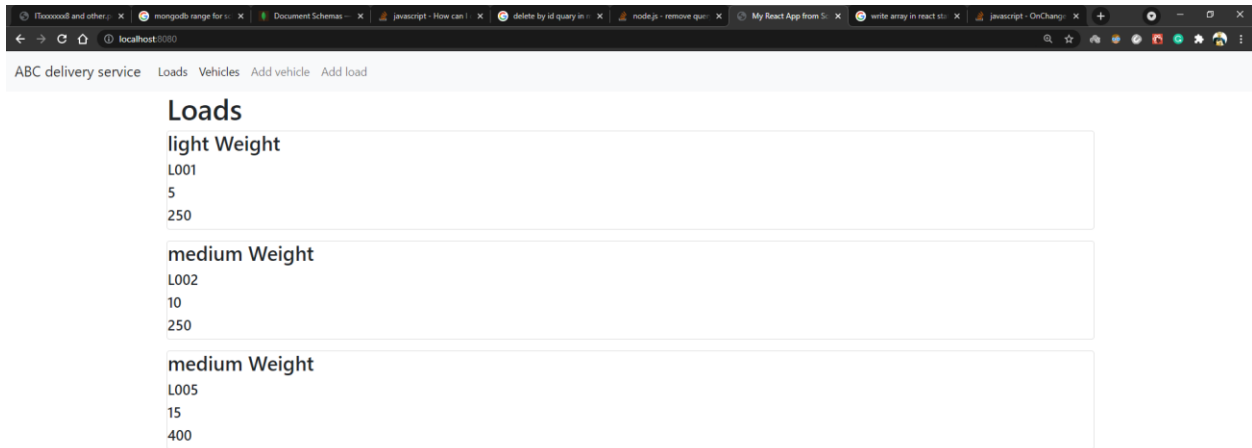
2018

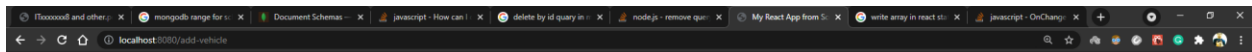
If found please return to SLIIT, New Kandy Road, Malabe.



Screenshots of all user interfaces of the frontend application

<<< Insert all screenshots here... >>>





ABC delivery service [Loads](#) [Vehicles](#) [Add vehicle](#) [Add load](#)

Add Vehicle

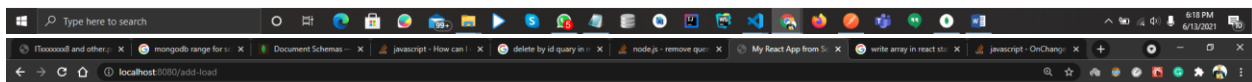
Vehicle name

vehicleType

description

load type

Submit



ABC delivery service [Loads](#) [Vehicles](#) [Add vehicle](#) [Add load](#)

Add Load

Name

code

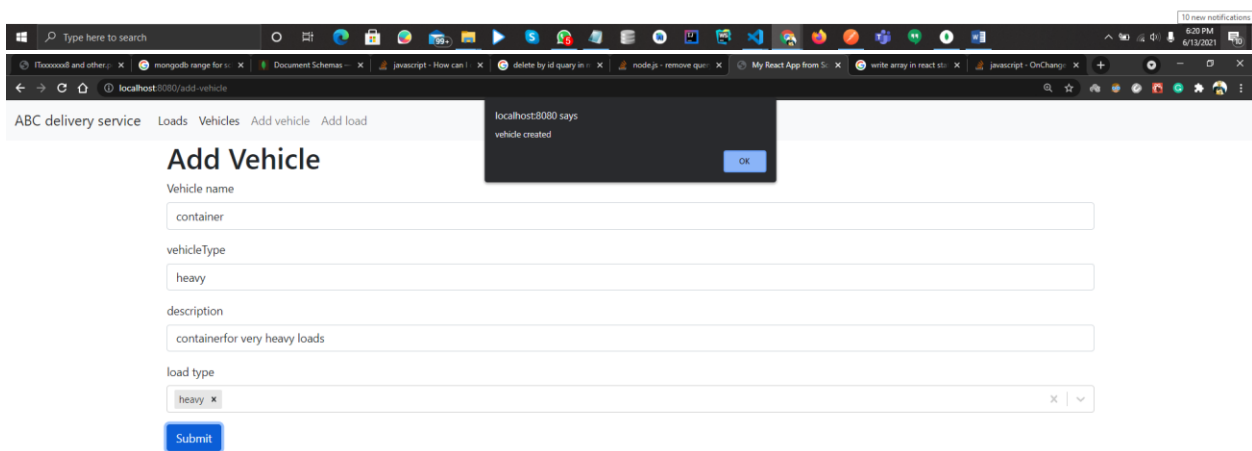
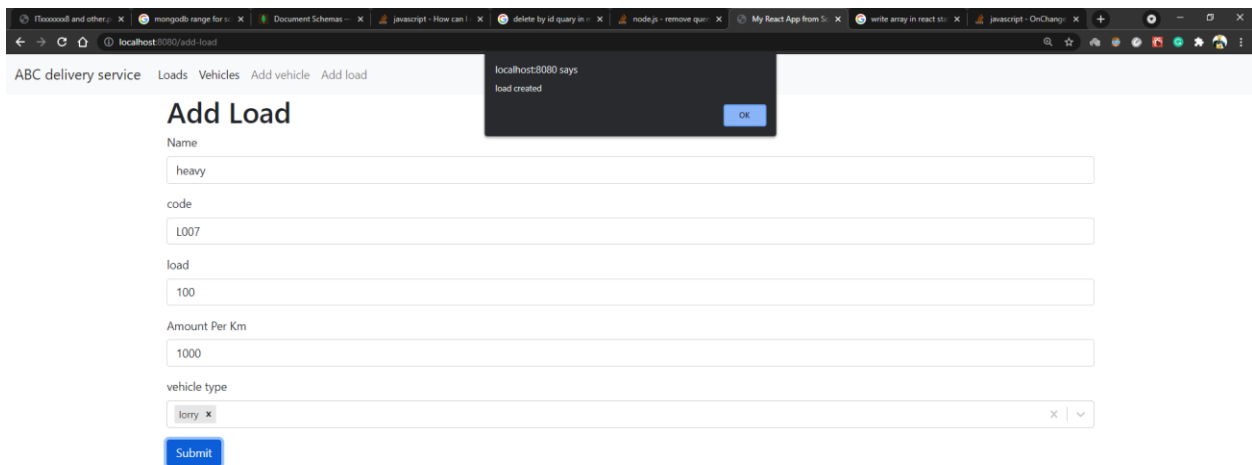
load

Amount Per Km

vehicle type

Submit





Screenshots of all MongoDB collections

<<< Insert all screenshots here... >>>

cloud.mongodb.com

Access Manager Billing

AFINALS

DATA STORAGE

Clusters

Triggers

Data Lake

SECURITY

Database Access

Network Access

Advanced

Clusters

Find a cluster...

CREATE A NEW CLUSTER

SANDBOX

affinal

Version 4.4.6

CONNECT METRICS COLLECTIONS

CLUSTER TIER

MO Sandbox (General)

REGION

AWS / Mumbai (ap-south-1)

TYPE

Replica Set - 3 nodes

LINKED REALM APP

None Linked

This is a Shared Tier Cluster

If you need a database that's better for high-performance production applications, upgrade to a dedicated cluster.

Upgrade

Logical Size 50.1 KB

513.9 MB

18

Operations R: 0.02 W: 0

8.3%

Connections

500

System Status: All Good

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myFirstDatabase.vehicles

Documents

Documents 6 TOTAL SIZE 771B AVG SIZE 129B INDEXES 1 TOTAL SIZE 36.0KB AVG SIZE 36.0KB

Documents Aggregations Schema Explain Plan Indexes Validation

Filter { field: "value" }

ADD DATA

name: "car"

vehicleType: "verylight"

description: "transports light loads"

__v: 0

_id: ObjectId("6054039632c0540871af1")

loads: Array

name: "car"

vehicleType: "medium"

description: "transports medium loads"

__v: 0

_id: ObjectId("6054039632c0540871af2")

loads: Array

name: "three wheel"

vehicleType: "light"

description: "transports light loads"

__v: 0

_id: ObjectId("6054039632c0540871af3")

loads: Array

name: "van"

vehicleType: "heavy"

description: "transports heavy loads"

__v: 0

_id: ObjectId("6054039632c0540871af4")

loads: Array

name: "scooter"

vehicleType: "veryheavy"

description: "transports very heavy loads"

__v: 0

_id: ObjectId("6054039632c0540871af5")

loads: Array

name: "scooter"

vehicleType: "light"

description: "scooter for very light loads"

__v: 0

INTERNET SECURITY

Update authorization failed. Please check if your license is valid.

Learn more about this message

Buy license Your computer is not protected.

MongoDB Compass - affinal0wyst.mongodb.net/myFirstDatabase.loads

Local

myFirstDatabase.loads

Documents

Documents Aggregations Schema Explain Plan Indexes Validation

ADD DATA VIEW (0) REFRESH

Displaying documents 1 - 5 of 5

DOCUMENTS 5 TOTAL SIZE 66.0KB AVG SIZE 13.2KB INDEXES 1 TOTAL SIZE 348.0KB AVG SIZE 348.0KB

Filter your data

admin config local myFirstDatabase loads vehicles

mongo@localhost:~\$

```
{ "_id": "001", "vehicles": [{"name": "light", "code": "L001", "load": "50", "amount": 250}], "amount": 250 }
```

```
{ "_id": "002", "vehicles": [{"name": "medium", "code": "L002", "load": "100", "amount": 250}], "amount": 250 }
```

```
{ "_id": "003", "vehicles": [{"name": "medium", "code": "L003", "load": "100", "amount": 400}], "amount": 400 }
```

```
{ "_id": "004", "vehicles": [{"name": "heavy", "code": "L004", "load": "100", "amount": 1000}], "amount": 1000 }
```

```
{ "_id": "005", "vehicles": [{"name": "heavy", "code": "L005", "load": "100", "amount": 1000}], "amount": 1000 }
```

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Access Manager Billing

DATA STORAGE

Clusters

Triggers

Data Lake

SECURITY

Database Access

Network Access

Advanced

myFirstDatabase

loads

vehicles

affinal

Overview Real Time Metrics Collections Search Profiler Performance Advisor Online Archive Command Line Tools

DATABASES: 1 COLLECTIONS: 2

myFirstDatabase.loads

COLLECTION SIZE: 680B TOTAL DOCUMENTS: 5 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT DOCUMENT

Find Reset

QUERY RESULTS 1-5 OF 5

```
{ "_id": "001c12d6166c5d0b4622c049408718f9",
  "vehicles": [
    {
      "name": "light weight",
      "code": "LW01",
      "load": "S",
      "amountPPEM": 250
    }
  ]
}
```

```
{ "_id": "001c12d6166c5d0b4622c049408718f9",
  "vehicles": [
    {
      "name": "medium weight",
      "code": "LW02",
      "load": "M",
      "amountPPEM": 250
    }
  ]
}
```

```
{ "_id": "001c12d6166c5d0b4622c049408718f9",
  "vehicles": [
    {
      "name": "heavy weight",
      "code": "LW03",
      "load": "H",
      "amountPPEM": 250
    }
  ]
}
```

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Access Manager Billing

DATA STORAGE

Clusters

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Advanced

myFirstDatabase

loads

vehicles

affinal

Overview Real Time Metrics Collections Search Profiler Performance Advisor Online Archive Command Line Tools

DATABASES: 1 COLLECTIONS: 2

myFirstDatabase.vehicles

COLLECTION SIZE: 1.04KB TOTAL DOCUMENTS: 8 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT DOCUMENT

Find Reset

QUERY RESULTS 1-8 OF 8

```
{ "_id": "001c12d6166c5d0b4622c049408718f9",
  "loads": [
    {
      "name": "bike",
      "vehicleType": "verylight",
      "description": "transports light loads"
    }
  ]
}
```

```
{ "_id": "001c12d6166c5d0b4622c049408718f9",
  "loads": [
    {
      "name": "car",
      "vehicleType": "medium",
      "description": "transports medium loads"
    }
  ]
}
```

```
{ "_id": "001c12d6166c5d0b4622c049408718f9",
  "loads": [
    {
      "name": "three wheel",
      "vehicleType": "light"
    }
  ]
}
```