**Assignment 2 – Data Modeling**

**NodeShopper**

Business Rules:

1. a CUSTOMER can have many INVOICE(s)
2. many INVOICE(s) are assigned to a CUSTOMER
3. an INVOICE can have many LINEITEM(s)
4. many LINEITEMs are added to an INVOICE

Data Model Fields:

1. CUSTOMER:
   1. \_id
   2. firstName
   3. lastName
   4. dateOfBirth
   5. username
2. INVOICE:
   1. \_id
   2. createDate
   3. shipDate
   4. subtotal
3. LINEITEM:
   1. \_id
   2. productName
   3. price
   4. qty

**NodeTech**

Business Rules:

1. a STUDENT has many ENROLLMENT(s)
2. an ENROLLMENT has many COURSE(s)
3. a STUDENT ENROLL(s) in many COURSE(s)

Data Model Fields:

1. STUDENT:
   1. studentId
   2. firstName
   3. lastName
2. ENROLLMENT:
   1. term
   2. gpa
   3. startDate
   4. endDate
3. COURSE
   1. coursed
   2. description
   3. instructor
   4. score
   5. letterGrade

**Instructions**

1. Using UMLet, Microsoft Visio, or Google Draw create ORD’s to represent the business rules in NodeShopper and NodeTech. Be sure to include the fields identified under the “Data Model Fields” section in your ORD.
2. Convert the proposed ORDs into NoSQL data structures.
   1. Special note. All NoSQL data structures must be valid JSON, which can be validated using <https://jsonlint.com/>. In addition, you will need to supply values for each of the fields identified under the “Data Model Fields” section. NoSQL Data Structures with empty fields with incur a point penalty.
3. Add the proposed ORD’s to your personal portfolio website under the “Database Diagrams” page.
4. Add the ORD’s and NoSQL Data Structure’s to a single Word document and include your name, date, and assignment number.