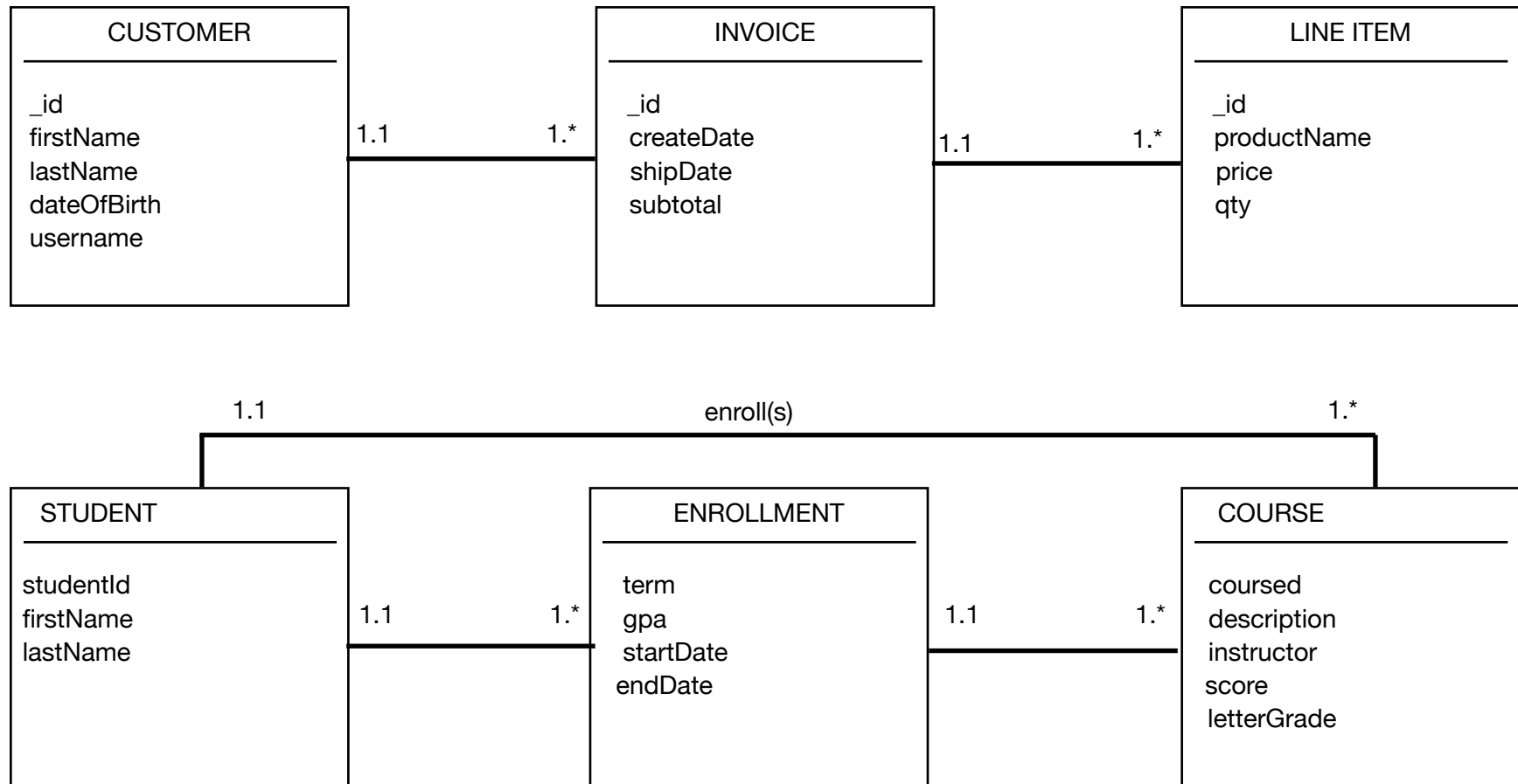


William Austin
06/03/2023
Assignment 2.2 - Data Modeling



A Customer can have many invoices

```
{
  "_id": "001",
  "firstName": "William",
  "lastName": "Austin",
  "dateOfBirth": "03/07/1987",
  "userName": "waustin001",
  "invoices": [
    {
      "-id": "10001",
      "createDate": "06/03/2023",
      "shipDate": "06/04/2023",
      "subtotal": 30.95
    },
    {
      "-id": "10002",
      "createDate": "06/01/2023",
      "shipDate": "06/03/2023",
      "subtotal": 29.95
    },
    {
      "-id": "10003",
      "createDate": "05/29/2023",
      "shipDate": "05/31/2023",
      "subtotal": 199.99
    }
  ]
}
```

Many Invoices are assigned to A Customer

```
{
  "_id": "10001",
  "customer_id": "001",
  "createDate": "06/03/2023",
  "shipDate": "06/04/2023",
  "subtotal": 30.95
},
{
  "-id": "10002",
  "customer_id": "001",
  "createDate": "06/01/2023",
  "shipDate": "06/03/2023",
  "subtotal": 29.95
},
{
  "-id": "10003",
  "customer_id": "001",
  "createDate": "05/29/2023",
  "shipDate": "05/31/2023",
  "subtotal": 199.99
}
```

One Invoice can have many LineItems

```
{
  "-id": "10003",
  "createDate": "05/29/2023",
  "shipDate": "05/31/2023",
  "subtotal": 199.99,
  "lineitem": [
    {
      "_id": "456-98-5555",
      "productName": "Universal Remote",
      "price": 20.99,
      "qty": 1
    },
    {
      "_id": "456-98-5556",
      "productName": "AA Batteries",
      "price": 15.99,
      "qty": 1
    },
    {
      "_id": "456-98-5557",
      "productName": "Televsion",
      "price": 163.01,
      "qty": 1
    }
  ]
}
```

Many LineItems are added to an Invoice

```
{
  "_id": "456-98-5555",
  "invoice_id": "10003",
  "productName": "Universal Remote",
  "price": 20.99,
  "qty": 1
},
{
  "_id": "456-98-5556",
  "invoice_id": "10003",
  "productName": "AA Batteries",
  "price": 15.99,
  "qty": 1
},
{
  "_id": "456-98-5557",
  "invoice_id": "10003",
  "productName": "Television",
  "price": 163.01,
  "qty": 1
}
```

A student can have many Enrollments

```
{
  "studentId": 1,
  "firstName": "William",
  "lastName": "Austin",
  "enrollment": [
    {
      "term": "Spring - 2023",
      "gpa": 4.0,
      "startDate": "05/18/2023",
      "endDate": "07/17/2023"
    },
    {
      "term": "Winter - 2023",
      "gpa": 4.0,
      "startDate": "01/18/2023",
      "endDate": "03/17/2023"
    },
    {
      "term": "Fall - 2022",
      "gpa": 4.0,
      "startDate": "10/10/2022",
      "endDate": "12/07/2022"
    }
  ]
}
```

A enrollment had many Courses

```
{
  "term": "Spring - 2023",
  "gpa": 4.0,
  "startDate": "05/18/2023",
  "endDate": "07/17/2023",
  "course": [
    {
      "courseName": "Java II",
      "description": "Advanced JS Techniques",
      "instructor": "Jane Doe",
      "score": 98.86,
      "letterGrade": "A"
    },
    {
      "courseName": "HTML II",
      "description": "Advanced HTML Techniques",
      "instructor": "John Doe",
      "score": 89.86,
      "letterGrade": "B"
    }
  ]
}
```

A Student Enrolls in Many Courses

```
{
  "studentId": 1,
  "firstName": "William",
  "lastName": "Austin",
  "enrollment":
    {
      "term": "Spring - 2023",
      "gpa": 4.0,
      "startDate": "05/18/2023",
      "endDate": "07/17/2023",
      "course": [
        {
          "courseName": "Java II",
          "description": "Advanced JS Techniques",
          "instructor": "Jane Doe",
          "score": 98.86,
          "letterGrade": "A"
        },
        {
          "courseName": "HTML II",
          "description": "Advanced HTML Techniques",
          "instructor": "John Doe",
          "score": 89.86,
          "letterGrade": "B"
        }
      ]
    },
}
```