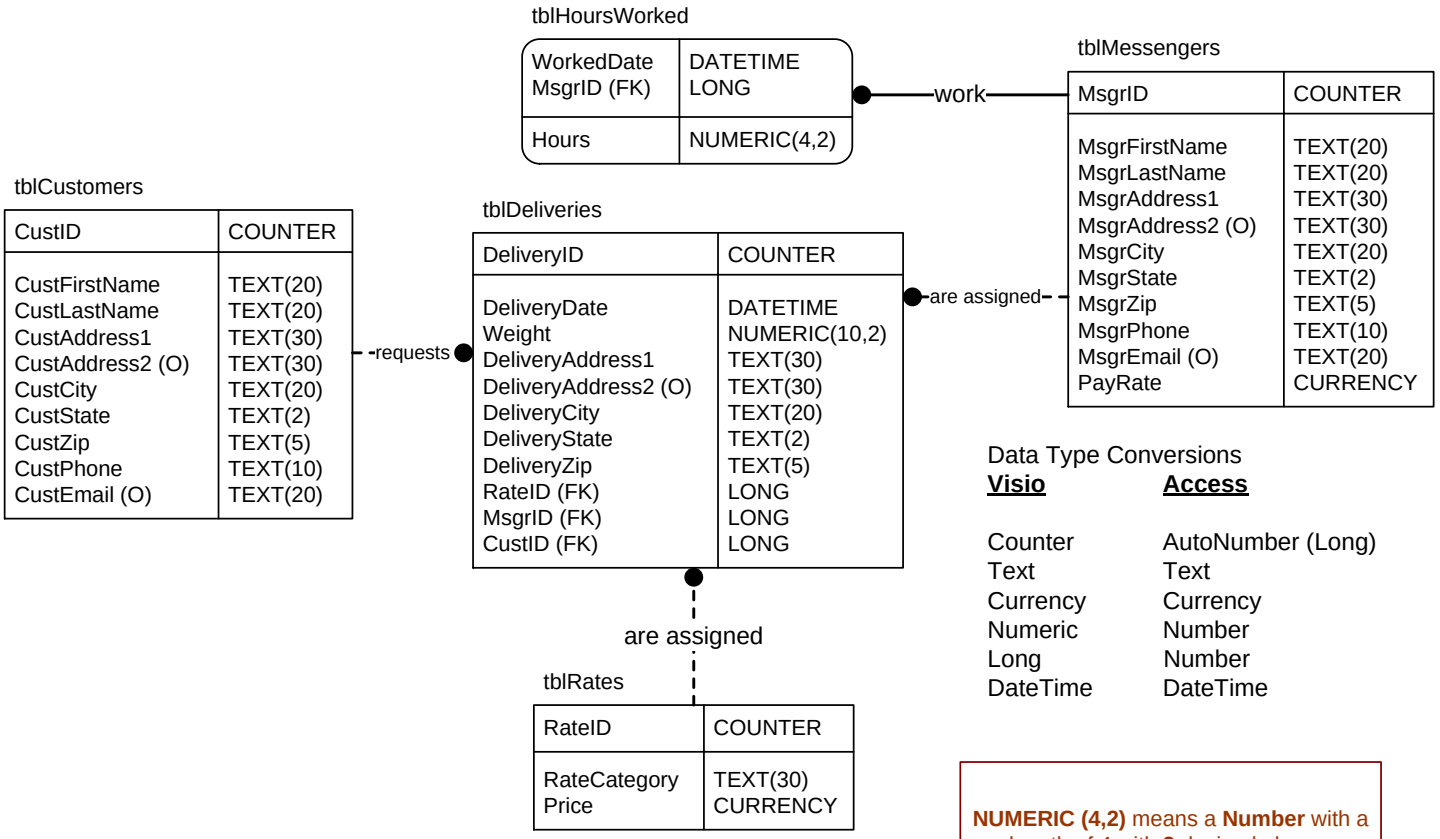
FinalProject

Using the following E-R Diagram - Create an Access Database

E-R Diagram Speedy Messenger Service Database – Final Project

Business Rules:

1. The **Delivery Rates** are based upon the **RateCategory.**
2. The **number** of **packages** delivered *per* **day** by *each* **messenger** must be calculated.
3. The **number** of **packages** delivered for *each* **customer** *per* **day** must be calculated.
4. For *each* **package** the **weight**, **location** and **RateID** (category used to determine delivery rate) must be tracked.
5. A Messenger ***must*** attend a 2 week ***unpaid*** training session ***BEFORE*** being assigned a delivery.
During this period of time, hours do NOT need to be tracked.
6. The **number of hours** a **messenger** works *daily* must be calculated.
7. A **package** must have *only* one **Delivery** *associated* with it.



Data Type Conversions

Visio	**Access**
Counter	AutoNumber (Long)
Text	Text
Currency	Currency
Numeric	Number
Long	Number
DateTime	DateTime

NUMERIC (4,2) means a **Number** with a length of 4 with **2** decimal places.

In Access use **Number** Data Type. No need to enter a length just the **decimal places**.

Speedy Messenger Service is a business that employs messengers who deliver packages in an urban area. The messengers are paid an hourly rate plus a fixed dollar amount for every package delivered. The database should track the number of packages delivered per day by each messenger, and the number and weight of packages delivered for customers. Customer bills need to be generated and the data in the database will be imported into a payroll system to generate the employee paychecks.

Database Requirements

Checklist– **VERIFY** you have done the following **BEFORE** submitting the Project!!!	
Requirement	**Point Deduction**
☐ Database should be named **SpeedyMessenger**	**5**
☐ **Table Names** should *match* the **Entity Names** in the E-R Diagram	**1 for *each* Table**
☐ **Column Names** should *match* the **Attributes** within the **Entities** in the E-R Diagam	**1 for *each* Table**
☐ **Column: Data Types, Sizes** and **Decimal Places (*NUMERIC** Data type only*)** should *match* the E-R Diagram	**6 for *each* table**
☐ **Column Optionality AND/OR Required** should *match* the E-R Diagram	**2 for *each* table**
☐ **Primary Keys** should *match* the E-R Diagram	**5 for *each* table**
☐ **Relationships** should *match* the E-R Diagram *including* **Referential Integrity**	**10 points**
☐ **Foreign Keys** should be included in the *appropriate* table as *indicated* in the E-R Diagram	**5 points**
☐ **Database** should be set to **Compact on Close**	**5**
☐ **Total Possible POINTS DEDUCTED:**	**100**

Final Project Tips

In addition to the Notes that I included on the **E-R Diagram**, I suggest you refer to **Chapter 4** in the textbook under the **INTEGRITY RULES** section on **pages 131 – 139** and/or the **Additional Web Resources Vidoes** mentioned under **Learning Module 12.** These resources refer to how to do the following in **Access's GUI (Graphical User Interface) View**:

- **Create** a **Database | Create** a **Table**
-Entity Integrity (**Primary Keys**)
-Referential Integrity (**Relationships**, **Foreign Keys**, and **Enforcing Referential Integrity**)
-Legal Vaues Integrity (what values are allowed in a Column, how to indicate **Required** or **Optional** Columns)
-Assign a **Data Type**
-Assign **Column Sizes**
-**Delete** or **Add** a **Column**
-**Delete** a **Table**

For instructions on how to **Autmatically Compact a Database on Close**, if necessary use **Access Help**; searching for the topic: **compact**

Remember: **MS Access** refers to a **Column** as a **Field**. Good Luck☺