

[Link to Website](#)

Executive Summary

Primary changes were made to the design of the database including the number of tables and entities. We moved away from the Products, Customers, Manufacturers, and Sales model and instead moved to a model where we have a Sales and Invoices transaction model.

After we completed the design of the database, we began writing the queries that would create the tables and queries that would insert test data into the tables. Next, we began creating the HTML layout of the site for each of the tables. We used the template provided by the class instructor and course material.

Once the HTML of the site was completed, we began to create the data manipulation queries. These were used in the website in order to CREATE, READ, UPDATE, and DELETE data from the database via controls on the website, including forms and buttons which activate the CRUD controls.

Finally we added CSS via Bootstrap to our site in order to make it more appealing to the user. We tested the buttons and the flow of the UI to make sure that all CRUD functions work.

a) Project Outline and Database Outline, ERD Schema & Sample Data Updated Version

<https://edstem.org/us/courses/32532/discussion/2558953>

Techs for You is a company that mainly sells miscellaneous items or computer accessories that a user needs when using a computer such as: keyboard, mouse, and monitors. Techs for You aims to sell \$500K in computer accessories annually. Thus, this company needs a well-organized database to keep track of the manufacturing companies of the products, amount of sales that they have made, and the customers that buy their company's products. A database driven website will record Sales of Products to Customers and the Manufacturers of the Products.

Products: Records the details of the products that are being sold with product_id followed by the name of the product (product_name) and the price of the product.

- product_id: int, auto_increment, unique, PK
- manufacturer_id: int, auto_increment, unique, not NULL, FK from Manufacturers, ON CASCADE DELETE
- product_name: varchar(250), not NULL
- product_price: decimal(15,2), not NULL

- Relationship: M:M relationship between Products and Invoices with Sales placed in between to keep track of both product_id and invoices_id.
- Relationship: 1:M relationship with Products and Manufacturers

Manufacturers: Manufacturers of the Product

- manufacturer_id: int, auto_increment, unique, PK
- manufacturer_name: varchar(250), not NULL
- Relationship: M:1 relationship between Products and Manufacturers

Invoices: Records the ID of the product, ID of invoice, and ID of customer while also keeping record of the total price of the transaction.

- invoice_id: int, auto_increment, PK
- customer_id: int, auto_increment, unique, not NULL, FK from Customers
- transaction_date: date
- total_price: int, auto_increment, unique, not NULL
- Relationship: M:M relationship between Invoices and Products with Sales placed in between to keep track of both product_id and invoice_id.
- Relationship: M:1 relationship between Invoices and Customers with invoice_id as PK from Invoices and customer_id as FK from Customers.

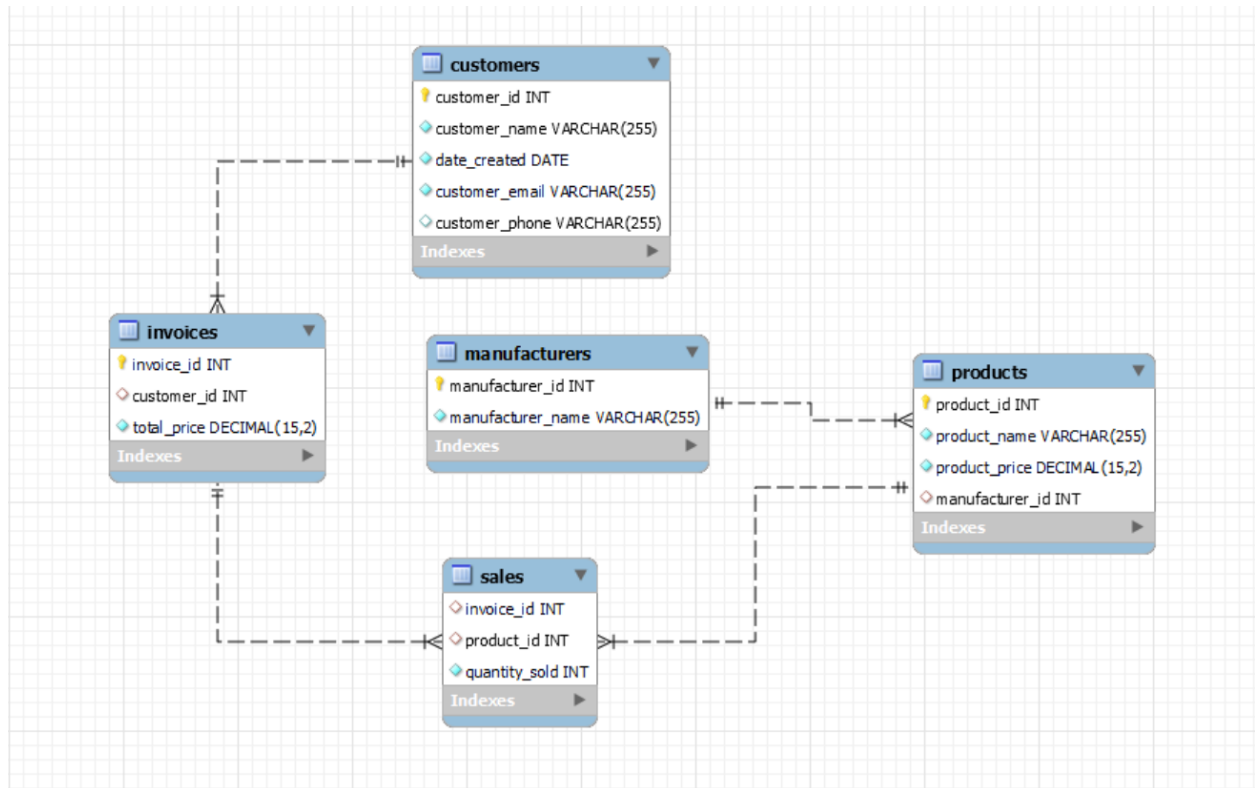
Customers: Records information about the customer (customer_name, date_created, customer_email, customer_phone), and customer_id.

- customer_id: int, auto_increment, unique, PK
- customer_name: varchar(250), not NULL
- date_created: varchar(250), not NULL
- customer_email: varchar(250), not NULL
- customer_phone: varchar(10), not NULL
- Relationship: M:1 relationship between Invoices and Customers with customer_id as PK for Customers.

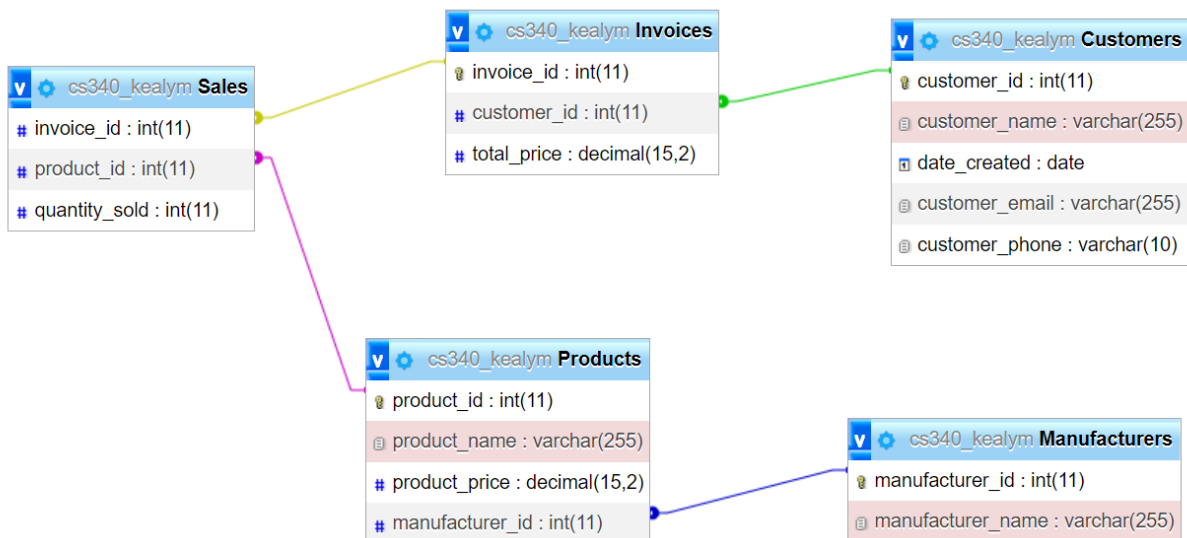
Sales: Records both invoices_id and products_id for their M:M relationship.

- Invoice_id: int(11), auto_increment, FK
- product_id: int(11), auto_increment, FK, ON CASCADE SET NULL
- quantity_sold: int(11), not NULL
- Relationship: A middle table for the relationship between Invoices and Products with their M:M relationship.

c) Entity-Relationship Diagram:






d) Schema:



e) Sample Data











Customers table:

		customer_id	customer_name	date_created	customer_email	customer_phone
<input type="checkbox"/>	 Edit  Copy  Delete	1	Sarah	2023-01-01	sarah@email.com	1111111111
<input type="checkbox"/>	 Edit  Copy  Delete	2	Michael	2023-01-15	mike@email.com	2222222222
<input type="checkbox"/>	 Edit  Copy  Delete	3	Lewis	2023-02-01	lewi@email.com	3333333333










Invoices table:

		invoice_id	customer_id	transaction_date	total_price
<input type="checkbox"/>	 Edit  Copy  Delete	1	1	2023-01-01	350.00
<input type="checkbox"/>	 Edit  Copy  Delete	2	2	2023-01-15	295.00
<input type="checkbox"/>	 Edit  Copy  Delete	3	3	2023-02-01	445.00

Manufacturers table:

		manufacturer_id	manufacturer_name
<input type="checkbox"/>	 Edit  Copy  Delete	1	Keyboard Inc.
<input type="checkbox"/>	 Edit  Copy  Delete	2	Mouse Inc.
<input type="checkbox"/>	 Edit  Copy  Delete	3	Headphone Inc.

Products table:

		product_id	product_name	product_price	manufacturer_id
<input type="checkbox"/>	 Edit  Copy  Delete	1	Keyboard	200.00	1
<input type="checkbox"/>	 Edit  Copy  Delete	2	Mouse	95.00	2
<input type="checkbox"/>	 Edit  Copy  Delete	3	Headphone	150.00	3

Sales table:

invoice_id	product_id	quantity_sold
1	1	1
1	3	1
2	1	1
2	2	1
3	1	1
3	2	1
3	3	1

f) CRUD Screenshots

READ Sales

Techs for You HOME CUSTOMERS PRODUCTS INVOICES MANUFACTURERS SALES			
Sales			
Add New			
invoice_id	product_id	quantity_sold	
1	3	1	Edit
2	1	1	Edit
2	2	1	Edit
3	1	1	Edit
3	2	1	Edit
3	3	1	Edit

CREATE Sales

Techs for You HOME CUSTOMERS PRODUCTS INVOICES MANUFACTURERS SALES			
Add Sale			
invoice_id	<input type="text" value="1"/>	product_id	<input type="text" value="1"/>
quantity sold	<input type="text"/>		
Add Sale Cancel			

UPDATE Sales

invoice_id	product_id	quantity_sold
1	3	1

Editing Sale:

Edit Sale

quantity sold

[Edit Sale](#)
[cancel](#)

READ / DELETE Manufacturers

Techs for You [HOME](#) [CUSTOMERS](#) [PRODUCTS](#) [INVOICES](#) [MANUFACTURERS](#) [SALES](#)

Manufacturers

Add New

manufacturer_id	manufacturer_name		
1	Keyboard Inc.	Edit	Delete
2	Mouse Inc.	Edit	Delete
3	Headphone Inc.	Edit	Delete

UPDATE Manufacturers

manufacturer_id	manufacturer_name
1	Keyboard Inc.

Editing Manufacturer:

Edit Manufacturer

cancel

CREATE Manufacturers

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Manufacturers

Add New

Add Manufacturer

manufacturer name:

Add Manufacturer

Cancel

READ Invoices

Invoices

Add New

invoice_id	customer_id	transaction_date	total_price	
1	1	2023-01-01	350.00	Edit
2	2	2023-01-15	295.00	Edit
3	3	2023-02-01	445.00	Edit

UPDATE Invoices

invoice_id	customer_id	transaction_date	total_price
1	1	2023-01-01	350.00

Editing Invoice:

Edit Invoice

transaction_date:

01/01/2023

total_price:

350.00

Edit Invoice

cancel

READ / DELETE Products

Products

Add New

product_id	product_name	product_price	manufacturer_name		
1	Keyboard	200.00	Keyboard Inc.	Edit	Delete
2	Mouse	95.00	Mouse Inc.	Edit	Delete
3	Headphone	150.00	Headphone Inc.	Edit	Delete

CREATE Products

Add Product

product name:

product price:

manufacturer id:

Add Product

Cancel

UPDATE Products

product_id	product_name	product_price	manufacturer_id
1	Keyboard	200.00	1

Editing Product:

Edit Product

product_name

product_price

manufacturer_name: Manufacturer Name

Edit Product

cancel

READ Customers

Customers

Search for Customers

Customer Name:

Search

Add New

customer_id	customer_name	date_created	customer_email	customer_phone	
1	Sarah	2023-01-01	sarah@email.com	111-111-1111	Edit
2	Michael	2023-01-15	mike@email.com	222-222-2222	Edit
3	Lewis	2023-02-01	lewi@email.com	333-333-3333	Edit

UPDATE Customers

customer_id	customer_name	date_created	customer_email	customer_phone
1	Sarah	2023-01-01	sarah@email.com	111-111-1111

Editing Customer:

Edit Customer

customer_name

Sarah

date_created:

01/01/2023



customer_email:

sarah@email.com

customer_phone:

111-111-1111

Edit Customer

cancel

CREATE Customers

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Customers

Search for Customers

Customer Name:

Search

Add New

Add Customer

customer name:

date created:

mm/dd/yyyy

customer email:

customer phone:

Add Customer

Cancel