

Team members names: Asa Crimin, Catherine Potgieter
Project title: Space Cowboy Coffee Roastery - Database
Project Group Number 71
Connected DB URL - <http://flip1.engr.oregonstate.edu:9112/>

Executive Summary: Space Cowboys Coffee Connections

Our initial project was called Space Cowboys Roastery. We were going to create a backend website for a roastery to keep track of the farms they got their beans from, their invoices, and the cafes they supply beans to. They would also keep track of reviews of specific coffees from cafes so that the roastery could know which of their beans are the most popular. After our first round of peer feedback, we knew something needed to change.

The peers who reviewed our initial project showed a lot of confusion in regards to how our entities interacted with each other, and our group found that we were just as confused as our peers when it came to understanding the interactions between our entities. We decided that we wanted to take a step in a new direction, and we redesigned our project into Space Cowboys Coffee Connections.

This new database driven website would be a third party focused on connecting cafes with roasteries so that both parties can benefit. Roasteries would be able to sell their beans to more cafes, and cafes would have new coffees for their customers. Space Cowboys Coffee Connections would be the organization that connects those two entities, promote the growth of both, and keep track of the invoices for the coffees that cafes are buying.

The process of changing our design from being a roastery to a partner connection business meant redesigning our entities from the ground up. We had to figure out what type of data we needed to track, and luckily in this design, we went with a much simpler approach. Our entities would be Cafes, Invoices, Coffees, and Roasteries. Our one M:M relationship would be keeping track of which invoices are connected to which coffees. We found that this was a much simpler and straightforward plan, and the reviews we got on our update seemed to agree.

Most of our fixes for the next few steps were minor formatting updates. Examples would be changing the attributes under each of our entities for simplicity, or small changes to our SQL queries to make sure our project fits the requirements of the assignment. And this was the trend until it came to developing our website.

Developing the website was trickier for us, as neither member in our group had used flask before. Luckily, the provided Flask starter app and instructions allowed us to make the website without too much trouble. Our main issues came from making sure our SQL queries were actually correct and worked properly with the website.

We'd often turn in our website drafts in a semi-working state, only to figure out the issues on our own a day or two later. This caused a lot of the feedback we'd get to either be outdated or something along the lines of "they said it wasn't working in their post, but it's working now". We still got feedback on usability and other aspects of the website that we would use to make it better, but in general much like with the first few steps of the project, we mainly just had to focus on fixing little issues pointed out to us by our peers.

At the end of this project, we believe that what we are submitting is a website that fits the requirements of the assignment. The reason we were able to be successful in doing so is because we were able to use feedback from our peers to change our project into something more understandable and build upon the small improvements suggested to us in each step.

Project Outline

Space Cowboy Coffee Connections is a cafe partner business that generates 2 million in sales annually. The main goal of the company is to connect cafes to different roasteries to allow cafes to expand the amount of coffee they can sell. They are currently working with 20 small cafes local to Portland, Oregon, and 10 different roasteries from across the United States. The Space Cowboys are growing in popularity and need a way to keep track of their partner roasteries, cafes, and their invoices. They also want to keep track of which coffees they sell to which cafes so they can return that information to their roastery partners. A database driven website will allow them to track their invoices, partners, and most frequently sold coffees, which in turn will help them to provide future business advice to their partners for mutual success.

Database Outline

- **Entity: Cafes**

- Purpose: Records information about each cafe partner
- Attribute: cafe_id
 - Data Type: int, auto_increment
 - Constraints: not Null, unique, PK
- Attribute: cafe_name
 - Data Type: String
 - Constraints: not Null VARCHAR(45)
- Attribute: cafe_country
 - Data Type: String
 - Constraints: not Null VARCHAR(45)
- Attribute: cafe_number
 - Data Type: String
 - Constraints: not Null VARCHAR(45)
- Entity Relationships:
 - Related to: Invoices
 - Related by: 1:M (one cafe can have many invoices on file)

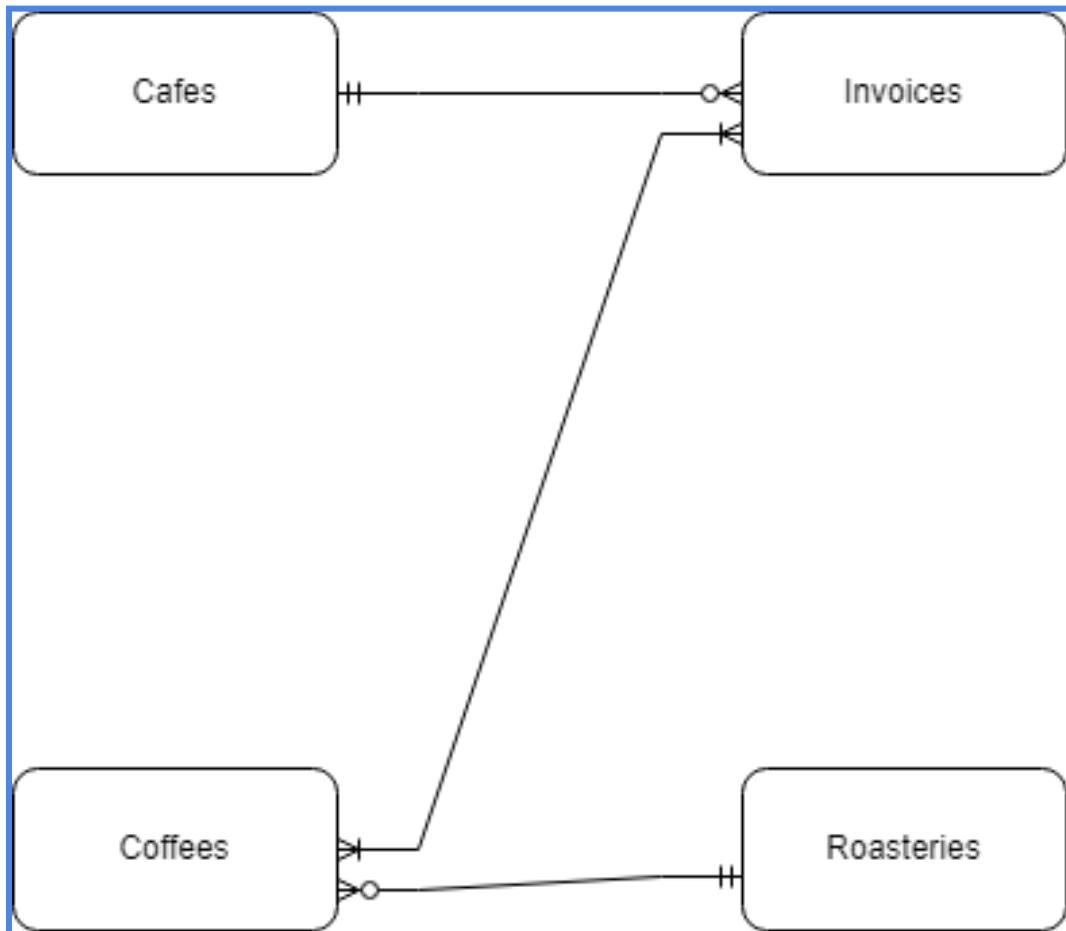
- **Entity: Invoices**

- Purpose: Records information regarding invoices for each coffee bought by cafes
- Attribute: invoice_id
 - Data Type: INT, auto_increment
 - Constraints: not Null, unique, PK
- Attribute: cafe_id
 - Data Type: INT, FK
 - Constraints: not NULL
- Attribute: order_date
 - Data Type: date
 - Constraints: not null

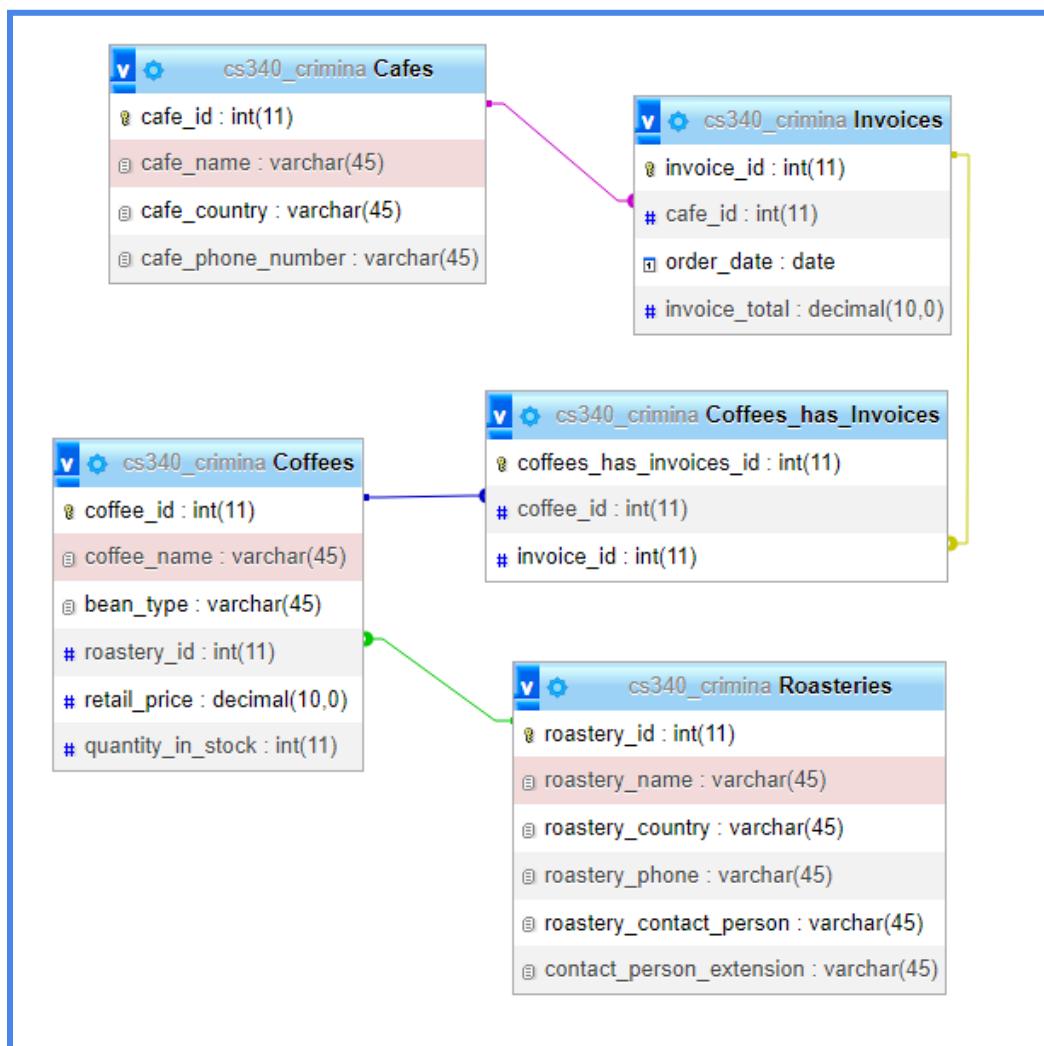
- Attribute: invoice_total
 - Data Type: decimal(10,0)
 - Constraints: not null
 - Entity Relationships:
 - Related to: Cafes
 - Related by: M:1 (many invoices can go to 1 cafe)
 - Related to: Coffees
 - Related by: M:M (There can be many invoices for many coffees)
- **Entity: Coffees**
 - Purpose: Records information about each coffee sold to each partner cafe
 - Attribute: coffee_id
 - Data Type: INT, auto increment
 - Constraints: not Null, unique, PK
 - Attribute: coffee_name
 - Data Type: VARCHAR(45)
 - Constraints: not Null
 - Attribute: bean_type
 - Data Type: VARCHAR(45)
 - Constraints: not Null
 - Attribute: roastery_id
 - Data Type: INT
 - Constraints: Nullable, FK
 - Attribute: retail_price
 - Data Type: DECIMAL
 - Constraints: Nullable
 - Attribute: quantity_in_stock
 - Data Type: INT
 - Constraints: Nullable
 - Entity Relationships:
 - Related to: Invoices
 - Related by: M:M (There can be many coffees on many invoices)
 - Related to: Roasteries
 - Related by: M:1 (Many coffees can come from 1 roastery)
- **Entity: Roasteries**
 - Purpose: Records information about each roastery partner
 - Attribute: roastery_id
 - Data Type: int, auto_increment, PK
 - Constraints: not Null, Unique
 - Attribute: roastery_name
 - Data Type: VARCHAR(45)
 - Constraints: not Null
 - Attribute: roastery_country
 - Data Type: VARCHAR(45)

- Constraints: not Null
- Attribute: roastery_phone
 - Data Type: VARCHAR(45)
 - Constraints: not Null
- Attribute: roastery_contact_person
 - Data Type: VARCHAR(45)
 - Constraints: None
- Attribute: roastery_contact_person_extension
 - Data Type: VARCHAR(45)
 - Constraints: None
- Entity Relationships:
 - Related to: Coffees
 - Related by: 1:M (1 roastery can make many coffees)

Entity-Relationship Diagram



Schema



Sample Data

Cafes			
cafe_id	cafe_name	cafe_country	cafe_phone_number
1	Hot & Cold Joint	USA	503-713-7761
2	Bean Me Up Bistro	USA	503-416-1005
3	Mug Shot Coffee Bar	USA	503-289-8560
4	The Hive Coffee Bar	USA	503-807-8622

Invoices				
invoice_id	cafe_id	order_date	invoice_total	
1	1	2022-04-08	440	
2	1	2022-10-20		246.87
3	2	2022-07-17		128
4	4	2022-01-01		60

Coffees					
coffee_id	coffee_name	bean_type	roastery_id	retail_price	quantity_in_stock
1	ethiopia yirgacheffe	light		4	20
2	Sumatra	dark		1	15
3	Three Region Blend	medium/light		2	16
4	Bella Vista	medium		3	18.99

Roasteries					
roastery_id	roastery_name	roastery_country	roastery_phone	roastery_contact_person	contact_person_extension
1	First Dawn Roastery	USA	216-245-0257	Mark Stanley	858
2	Aurora Roasting Co	USA	561-206-5154	Linda Yates	123
3	Pressing Matter Roaster	USA	331-240-1255	Clint Jordan	1545
4	Güd Cup Roastery	USA	732-290-9967	Meghan Marsha	42

Coffees_Has_Invoices	
invoice_id	coffee_id
1	1
2	1
2	2
3	1
4	4

Data Sources:

coffee roaster names- <https://howtostartanllc.com/business-name-generator/coffee-roastery>

cafe names- <https://www.fantasynamewgenerators.com/cafe-names.php>

addresses for roasters- <https://www.randomlists.com/random-addresses>

Addresses for the cafes - https://or.postcodebase.com/random_address_city/PORTLAND

Phone numbers for the roasters - <https://www.randomphonenumbers.com/>

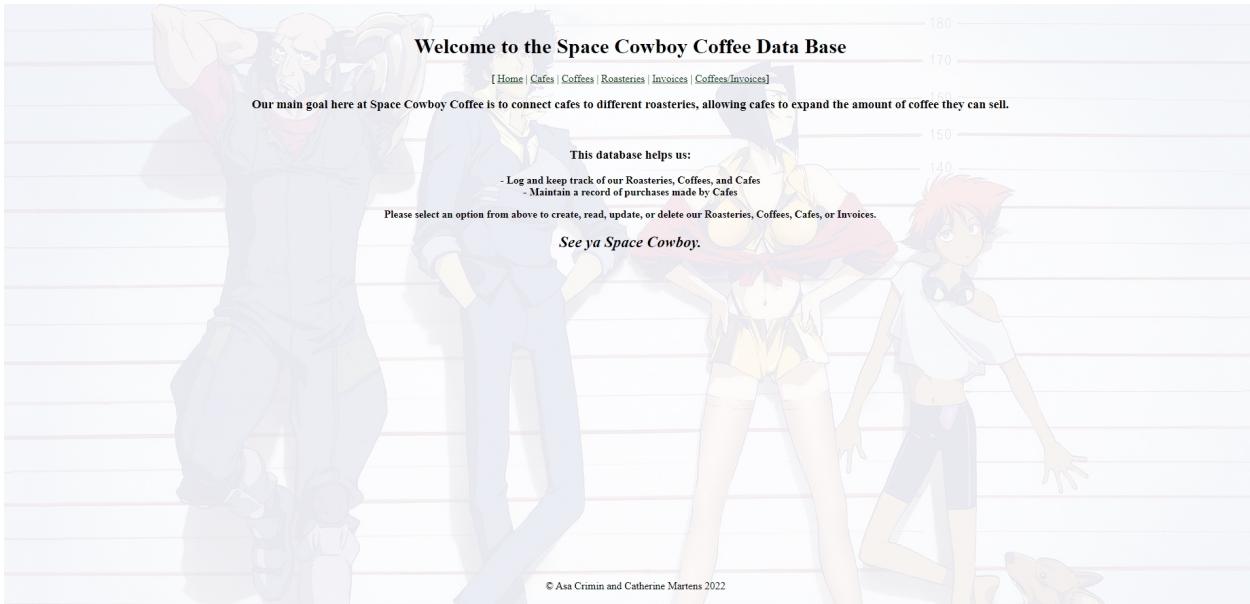
Phone numbers for the cafes - <https://www.bestrandoms.com/oregon-phone-number>

Names for the contact people - <http://random-name-generator.info/>

Date retrieved 10/20/22

Screen Captures

Index Page:



READ/BROWSE/DISPLAY/DELETE for Cafes Page:

Cafe

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices]

Add New

cafe_id	cafe_name	cafe_country	cafe_phone_number	Edit	Delete
1	Hot & Cold Joint	USA	503-713-7761	Edit	Delete
2	Bean Me Up Bistro	USA	503-416-1005	Edit	Delete
3	Mug Shot Coffee Bar	USA	503-289-\$660	Edit	Delete
4	The Hive Coffee Bar	USA	503-807-8622	Edit	Delete

READ/BROWSE/DISPLAY/DELETE for Coffees Page: *roastery_id is a FK and can be Null*

Coffees

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices]

Add New

coffee_id	coffee_name	bean_type	roastery_id	retail_price	quantity_in_stock	Edit	Delete
1	ethiopia yirgacheffe	light	None	20.00	14	Edit	Delete
2	Sumatra	dark	1	15.00	12	Edit	Delete
3	Three Region Blend	medium/light	1	16.00	25	Edit	Delete
4	Bella Vista	medium	2	18.99	133	Edit	Delete
5	Yummo	Medium-Light	3	25.67	33	Edit	Delete
6	Hot Shot	dark	1	25.67	33	Edit	Delete

READ/BROWSE/DISPLAY/DELETE for Roastery Page: *search function is on this page*

Roasteries

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices]

Add New

roastery_id	roastery_name	roastery_country	roastery_phone	roastery_contact_person	contact_person_extension	Edit	Delete
1	First Dawn Roastery	USA	216-245-0257	Mark Stanley	858	Edit	Delete
2	Aurora Roasting Co	USA	561-206-5154	Linda Yates	123	Edit	Delete
3	Pressing Matter Roastery	USA	331-240-1255	Clint Jordan	1545	Edit	Delete
4	Gud Cup Roastery	USA	732-290-9967	Meghan Marshall	42	Edit	Delete

Search: Use this search field to view a list of coffees from the roasteries in your network.

READ/BROWSE/DISPLAY/DELETE for Invoices Page:

Invoices

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices]

Add New

invoice_id	cafe_id	order_date	invoice_total	Edit	Delete
1	1	2022-04-08	440.00	Edit	Delete
2	1	2022-10-20	246.87	Edit	Delete
3	3	2022-07-17	128.00	Edit	Delete
4	4	2022-01-01	60.00	Edit	Delete
5	3	2022-12-08	25.67	Edit	Delete
6	3	2022-12-06	25.67	Edit	Delete

READ/BROWSE/DISPLAY/DELETE for Coffees/Invoices Page:

Coffees Has Invoices

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices]

Add New

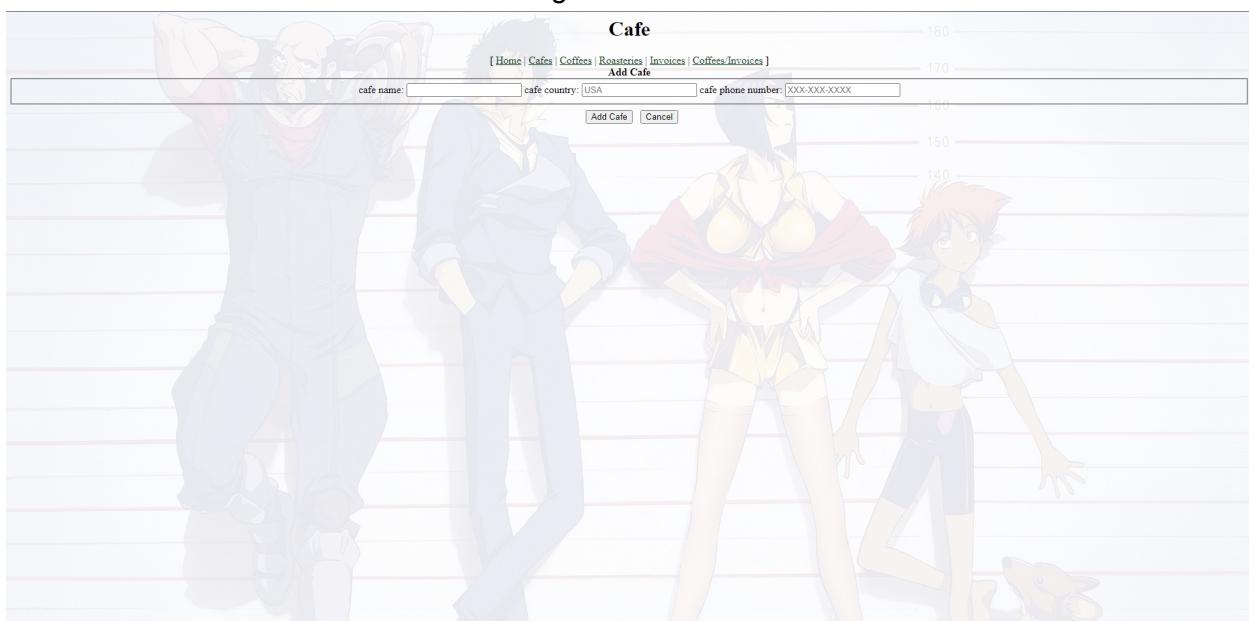
coffees_has_invoices_id	coffee_id	invoice_id	Delete
1	1	1	Delete
2	1	2	Delete
3	2	2	Delete
4	1	3	Delete
5	4	4	Delete
6	3	3	Delete

CREATE/INSERT/ADD NEW for Cafes Page:

Cafe

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices] Add Cafe

cafe name: []	cafe country: USA	cafe phone number: XXX-XXX-XXXX
[Add Cafe] [Cancel]		



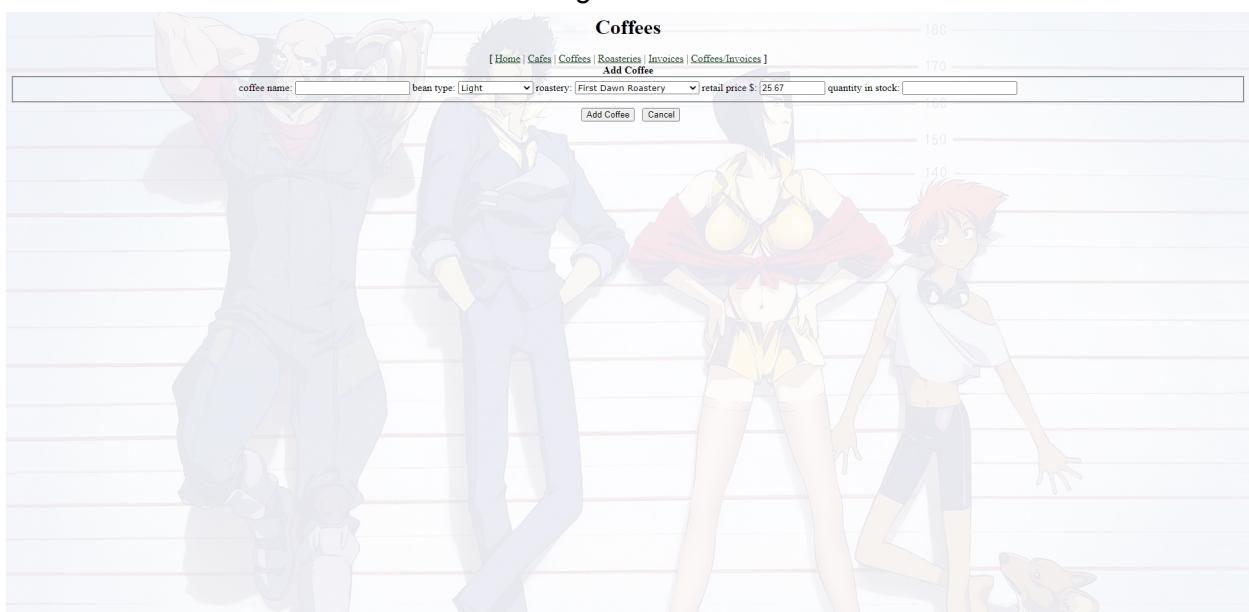
180
170
160
150
140

CREATE/INSERT/ADD NEW for Coffees Page:

Coffees

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices] Add Coffee

coffee name: []	bean type: Light	roastery: First Dawn Roastery	retail price \$: 25.67	quantity in stock: []
[Add Coffee] [Cancel]				



180
170
160
150
140

CREATE/INSERT/ADD NEW for Roastery Page:

Roasteries

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices] Add Roastery

roastery name:	roastery country:	USA	roastery phone number:	XXXX-XXXX	roastery contact person:	contact person extension:
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Search: Use this search field to view a list of coffees from the roasteries in your network.

CREATE/INSERT/ADD NEW for Invoices Page:

Invoices

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices] Add Invoice

Hot & Cold Joint	order date:	mm/dd/yyyy	invoice total:	25.67
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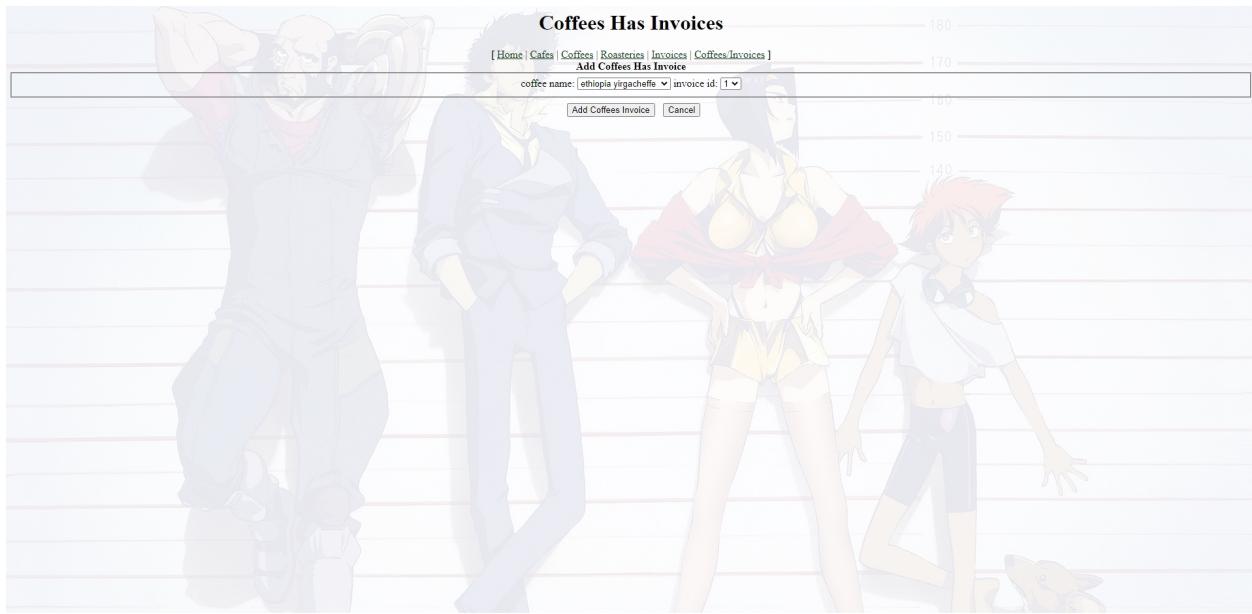
CREATE/INSERT/ADD NEW for Coffees/Invoices Page:

Coffees Has Invoices

[Home | Cafes | Coffees | Roasters | Invoices | Coffees/Invoices]
Add Coffees Has Invoice

coffee name: ethiopia yirgacheffe | invoice id: 1 |

Add Coffees Invoice | Cancel



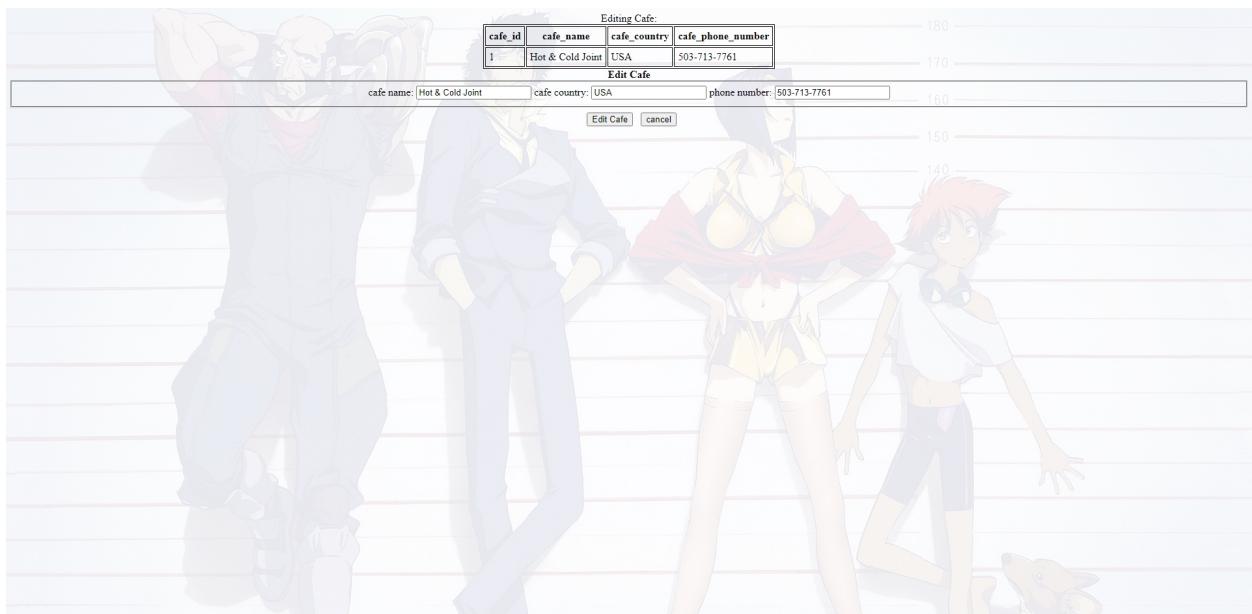
UPDATE for Cafes Page:

Editing Cafe:

cafe_id	cafe_name	cafe_country	cafe_phone_number
1	Hot & Cold Joint	USA	503-713-7761

cafe name: Hot & Cold Joint | cafe country: USA | phone number: 503-713-7761 |

Edit Cafe | cancel



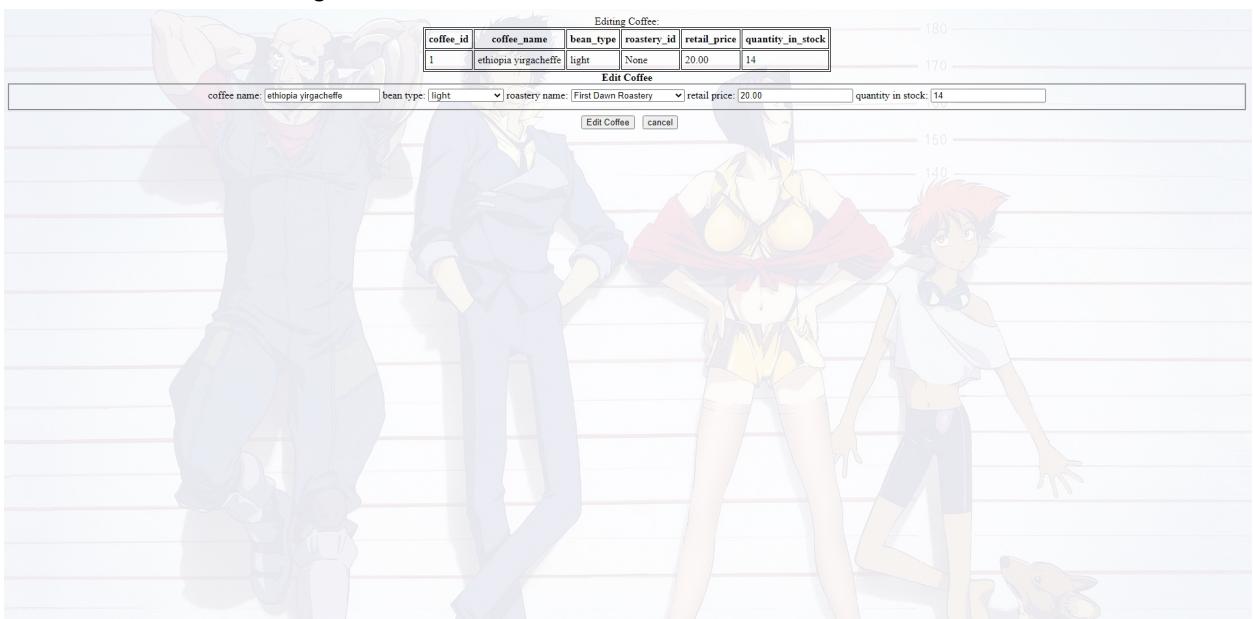
UPDATE for Coffees Page:

Editing Coffee:

coffee_id	coffee_name	bean_type	roastery_id	retail_price	quantity_in_stock
1	ethiopia yrgacheffe	light	None	20.00	14

coffee name: ethiopia yrgacheffe | bean type: light | roastery name: First Dawn Roastery | retail price: 20.00 | quantity in stock: 14

Edit Coffee | cancel



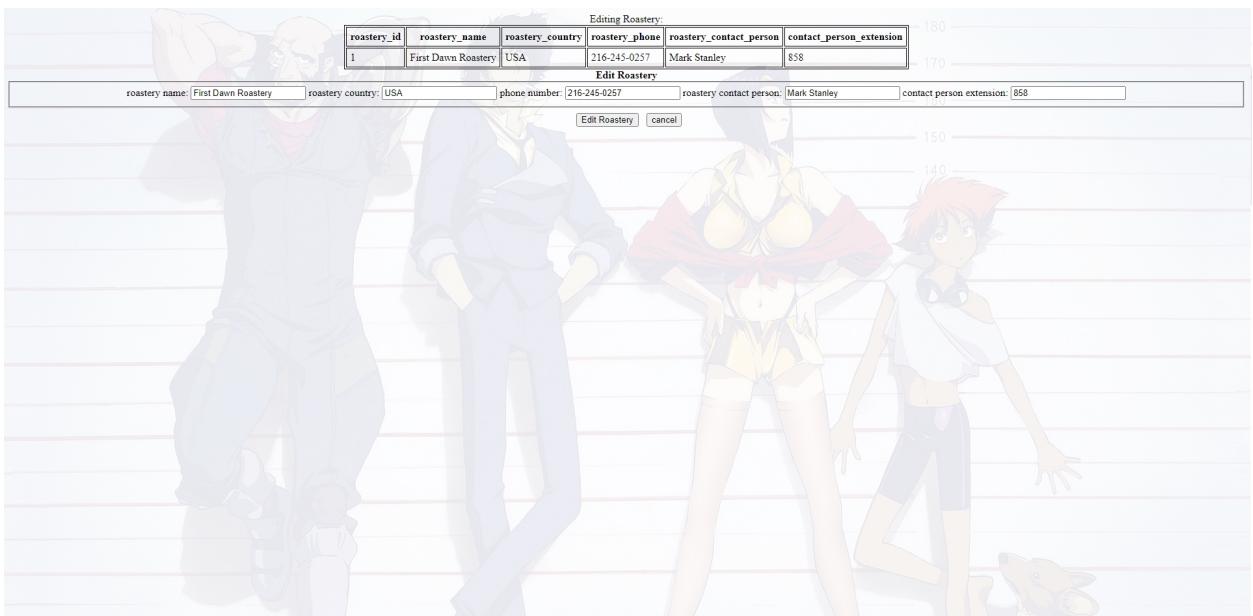
UPDATE for Roastery Page:

Editing Roastery:

roastery_id	roastery_name	roastery_country	roastery_phone	roastery_contact_person	contact_person_extension
1	First Dawn Roastery	USA	216-245-0257	Mark Stanley	858

roastery name: First Dawn Roastery | roastery country: USA | phone number: 216-245-0257 | roastery contact person: Mark Stanley | contact person extension: 858

Edit Roastery | cancel

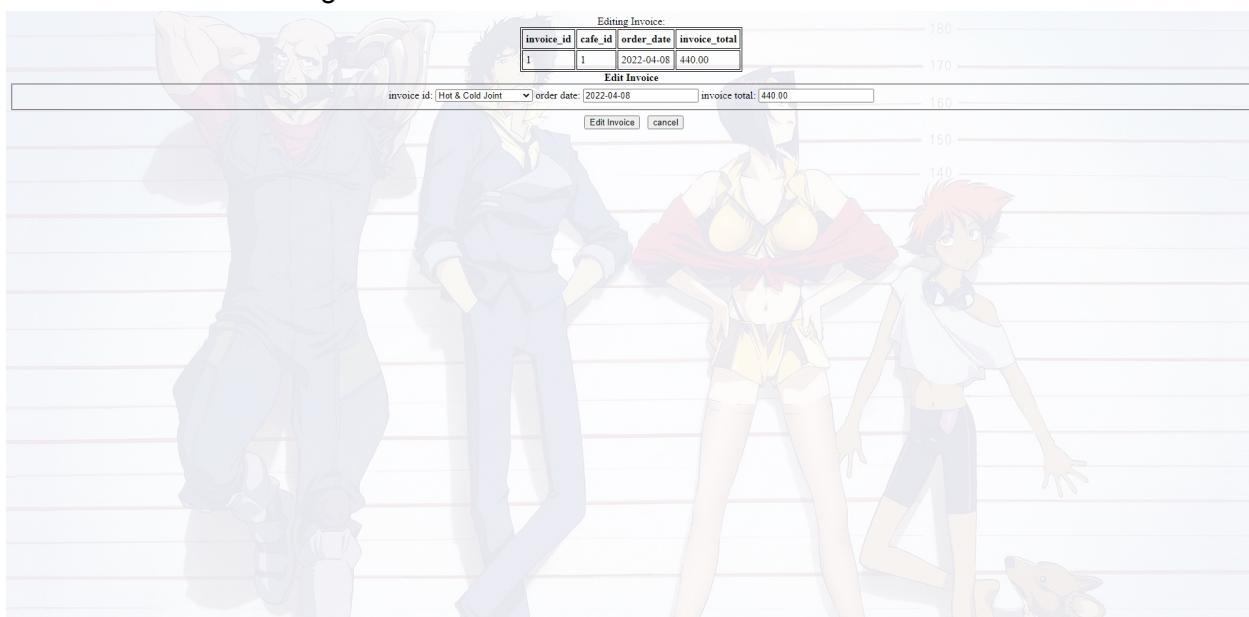


UPDATE for Invoices Page:

Editing Invoice:

invoice_id	cafe_id	order_date	invoice_total
1	1	2022-04-08	440.00

Invoice id: Hot & Cold Joint | Order date: 2022-04-08 | Invoice total: 440.00



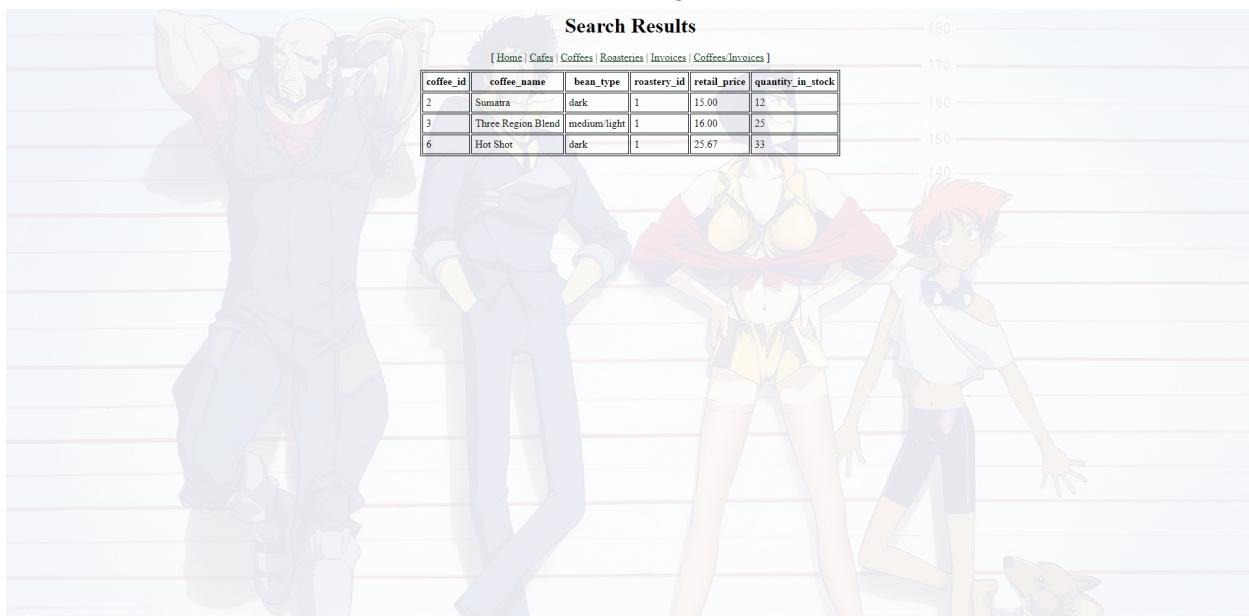
180
170
160
150
140

SEARCH Results for Search Results/Roasteries Page:

Search Results

[Home | Cafes | Coffees | Roasteries | Invoices | Coffees/Invoices]

coffee_id	coffee_name	bean_type	roastery_id	retail_price	quantity_in_stock
2	Sumatra	dark	1	15.00	12
3	Three Region Blend	medium light	1	16.00	25
6	Hot Shot	dark	1	25.67	33



180
170
160
150
140