

# CS 340 Project Step 6

## Team Members

### Group 91

Troy Diaz  
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### URL to Website:

Must be on the OSU network (VPN) to open. Works in Chrome, Firefox, Opera GX, and is untested in other browsers.

<http://classwork.engr.oregonstate.edu:9119/>

Effect used on about page: fancy 3D effect created by <https://codepen.io/kevinpowell/pen/GRBdLEv> and fitted to our website

# Executive Summary

Our database is designed to assist in tracking and maintaining fire hydrants across various regions, ensuring efficiency and reliability in data management. From its inception, our site has undergone multiple changes, both in terms of functionality and design. Initially, we focused on implementing the fundamental CRUD (Create, Read, Update, Delete) operations, which presented significant challenges. However, after extensive development and testing, we successfully established a fully operational web application.

As the project evolved, we placed greater emphasis on improving the user interface and overall usability. This included refining the visual appeal of the site by implementing a more uniform color scheme to create a cohesive look and feel. We also addressed specific usability concerns, such as ensuring the "Add New" button remains visible while scrolling to facilitate data entry without obstructing table views. Additionally, an issue with the delete button overlapping its container was fixed to enhance the overall interface functionality.

Beyond visual improvements, technical refinements were made to optimize performance and ensure seamless user experience. A major issue causing table pages to time out after extended use was resolved, preventing loading failures. We also addressed database connectivity problems affecting the Inspect Workers table, ensuring accurate and consistent data retrieval across all sections. These backend optimizations contributed to a more stable and reliable system.

Further enhancements included improving navigation by adding a link to the About page in the header, allowing users to easily return after viewing different sections of the site. We also expanded CRUD functionality to all tables beyond the hydrants table, ensuring comprehensive data management across all entities. To facilitate smoother data entry, dropdown selectors were added to all foreign key fields on the Inspect Hydrant, Maintenance Records, and Inspect Workers pages, streamlining selection and improving efficiency.

Moreover, adjustments were made to the home and About pages to reflect the final state of the website, ensuring clarity and consistency in its presentation. These iterative improvements, driven by user feedback and real-world testing, have transformed the system into a well-structured, user-friendly, and fully functional fire hydrant management platform. The result is a refined application that enhances operational efficiency and provides users with an intuitive, reliable interface for tracking and maintaining fire hydrants effectively.

# StreamLine



# **Overview**

Our StreamLine application is designed to manage data for over 5,000 fire hydrants across urban, suburban, and rural areas. Fire hydrants require regular maintenance, including inspections and repairs performed by field workers. To ensure operational efficiency and make it easier to keep hydrants working for emergencies, the status of these hydrants must be tracked, allowing field workers to prioritize their tasks effectively.

StreamLine will serve as a centralized hub for hydrant data, consolidating key details such as unique IDs, locations, and hydrant types. The problem with current databases is that most information about hydrants are stored in multiple systems (spreadsheets, handwritten logs, legacy software). This makes it challenging to access reliable and comprehensive hydrant information when needed.

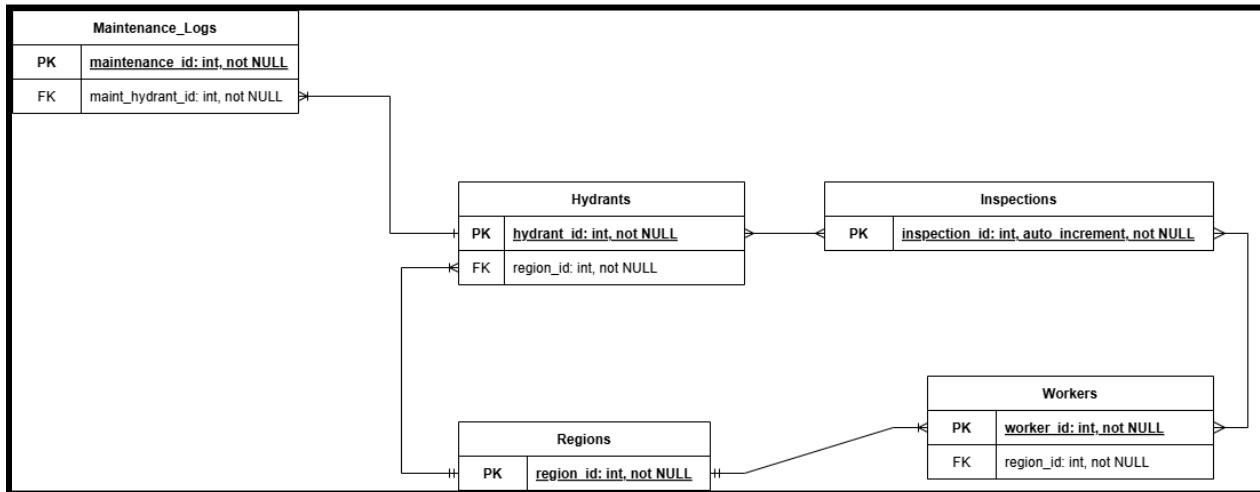
The solution is to create a centralized fire hydrant database powered by StreamLine. This platform will automate manual tasks such as scheduling maintenance and inspections, reducing human error and increasing efficiency.

# Database Outline

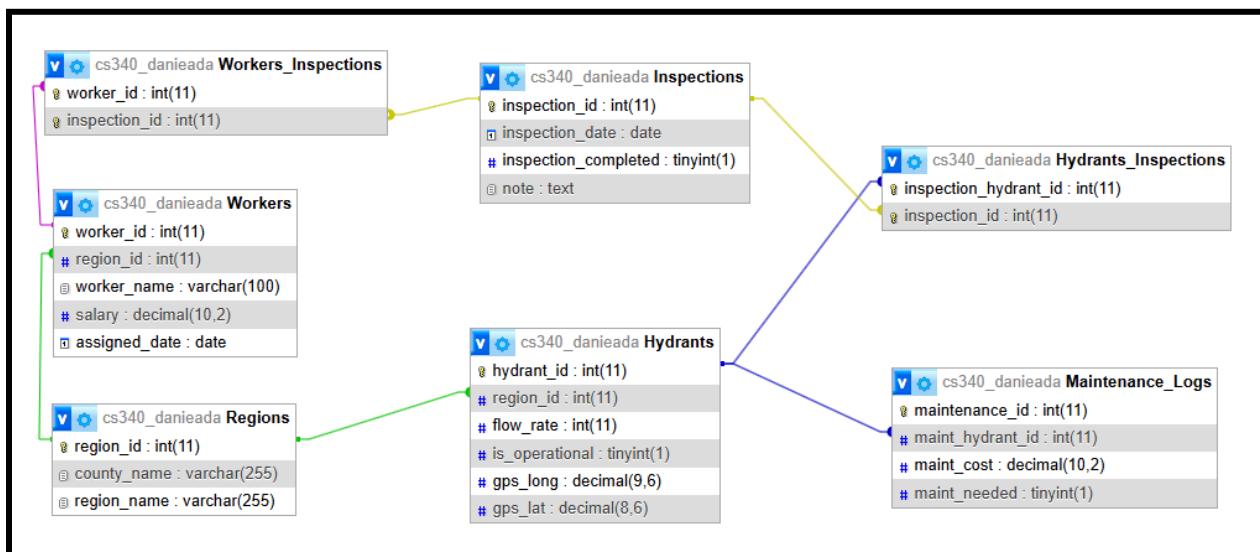
- **Hydrants:** Records the details of individual fire hydrants.
  - **Attributes**
    - hydrant\_id: int, not NULL, auto\_increment, PK
    - region\_id: int, not NULL, FK
    - flow\_rate: int
    - is\_operational: boolean, not NULL
    - gps\_long: decimal(9,6), not NULL
    - gps\_lat: decimal(8,6), not NULL
  - **Relationships**
    - A M:1 relationship between Hydrants and Regions is implemented with region\_id as a FK inside of Hydrants
    - A 1:M relationship between Hydrants and Maintenance\_Logs is implemented with hydrant\_id as a FK inside of Maintenance\_Logs
    - A M:N relationship between Hydrants and Inspections is implemented with hydrant\_id as a FK inside of Inspections
- **Regions:** Records the details of regions where multiple hydrants are located.
  - **Attributes**
    - region\_id: int, not NULL, auto\_increment, PK
    - county\_name: varchar, not NULL
    - region\_name: varchar, not NULL
  - **Relationships**
    - A 1:M relationship between Regions and Hydrants is implemented with region\_id as a FK inside of Hydrants
    - A 1:M relationship between Regions and Workers is implemented with region\_id as a FK inside of Workers
- **Inspections:** Records the details of inspections done on fire hydrants.
  - **Attributes**
    - inspection\_id: int, auto\_increment, not NULL, PK
    - inspection\_date: date, not NULL
    - inspection\_completed: boolean, not NULL
    - note: text
  - **Relationships**
    - A M:N relationship between Inspections and Hydrants is implemented with inspection\_id as a FK inside of Hydrants
    - A M:N relationship between Inspections and Workers is implemented with inspection\_id as a FK inside of Workers

- **Workers:** Records the details of an individual worker.
  - **Attributes**
    - worker\_id: int, not NULL, auto\_increment PK
    - region\_id: int, not NULL, FK
    - worker\_name: varchar(100), not NULL
    - salary: decimal(10,2), not NULL
    - assigned\_date: date, not NULL (when the worker was assigned to inspection)
  - **Relationships**
    - A M:N relationship between Workers and Inspections is implemented with worker\_id as a FK inside of Inspections
    - A M:1 relationship between Workers and Regions is implemented with region\_id as a FK inside of Workers
- **Maintenance\_Logs:** Records maintenance details for a specific hydrant.
  - **Attributes**
    - maintenance\_id: int, not NULL, auto\_increment, PK
    - maint\_hydrant\_id: int, not NULL, FK
    - maint\_cost: decimal(10,2), not NULL
    - maint\_needed: boolean, not NULL
  - **Relationships**
    - A M:1 relationship between Maintenance\_Logs and Hydrants is implemented with hydrant\_id as a FK inside of Maintenance\_Logs
- **Workers\_Inspections:** Intersection table of Workers and Inspections.
  - **Attributes**
    - worker\_id: int, not NULL, FK
    - inspection\_id: int, not NULL, FK
- **Hydrants\_Inspections:** Intersection table of Hydrants and Inspections
  - **Attributes**
    - inspection\_hydrant\_id: int, not NULL, FK
    - inspection\_id: int, not NULL, FK

# Entity Relationship Diagram



# Schema Diagram



# Normalization

Our design meets First Normal Form (1NF) because there are no repeating groups or arrays within cells. Each column contains atomic values such as integers, strings, and booleans. Additionally, each table has a primary key that uniquely identifies its rows.

The design is also in Second Normal Form (2NF) because it is already in 1NF, and all non-key attributes fully depend on the primary key. For example, in the Hydrants table, attributes such as `flow_rate` and `gps_long` depend on the primary key `hydrant_id`. Similarly, in the Regions table, attributes such as `region_name` and `county_name` depend fully on `region_id`.

Finally, our design meets Third Normal Form (3NF) since it is in 2NF, and no non-key attribute depends on another non-key attribute. We removed `maint_completed` from `Maintenance_Logs` eliminates redundancy, as `maint_needed` already tracks whether a hydrant requires maintenance. We changed `inspection_status` to `inspection_completed` to have boolean attributes so that the meaning is clear. Foreign key constraints with CASCADEoperations were also implemented to prevent orphaned data. In the Hydrants table, attributes like `flow_rate` and `gps_long` depend only on `hydrant_id`, while in the Regions table, `region_name` and `county_name` depend only on `region_id`. There are no cases of transitive dependencies, where non-key attributes depend on another non-key attribute.

# Data

## Hydrants

hydrant_id	region_id	flow_rate	is_operational	gps_long	gps_lat
1	101	1500	TRUE	40.712776	-74.005974
2	102	500	TRUE	34.052235	-118.243683
3	103	500	FALSE	51.507351	-0.127758
4	104	1000	TRUE	-33.868820	151.209290
5	105	500	FALSE	48.856613	2.352222

## Regions

region_id	county_name	region_name
101	Benton	Downtown
102	Linn	Riverside
103	Deschutes	High Desert
104	Clatsop	North Coast
105	Lane	South Valley

## Maintenance\_Logs

maintenance_id	maint_hydrant_id	maint_cost	maint_needed
1	1	150	TRUE
2	2	120	TRUE
3	3	200	TRUE
4	4	180	TRUE
5	5	170	FALSE

### **Hydrant\_Inspections**

inspection_hydrant_id	inspection_id
1	1
2	2
3	3
4	4
5	5

### **Inspections**

inspection_id	inspection_date	inspection_completed	note
1	2/1/2025	TRUE	Minor damage
2	1/15/2025	FALSE	Major repair needed
3	12/20/2024	TRUE	Passed inspection
4	1/25/2025	TRUE	Minor leak observed
5	11/30/2024	FALSE	Needs replacement

### **Workers**

region_id	worker_name	salary	assigned_date
101	John Smith	50000	12/1/2024
102	Jane Doe	55000	11/15/2024
103	Troy Diaz	48000	9/10/2024
104	Adam Danielson	52000	10/5/2024
105	Nico Johnson	51000	8/15/2024

### **Workers\_Inspections**

worker_id	inspection_id
201	1
202	2
203	3
204	4
205	5

# CRUD Operations

## Hydrants

### Read

The screenshot shows the StreamLine software interface with a red header bar containing the StreamLine logo and navigation links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. Below the header is a section titled "Manage Hydrants" with a sub-section titled "Add New Hydrant". A table displays a list of hydrants with columns: Edit, Delete, ID, Region ID, Flow Rate (GPM), Operational, Longitude, and Latitude. The data in the table is as follows:

	Edit	Delete	ID	Region ID	Flow Rate (GPM)	Operational	Longitude	Latitude
	<button>Edit</button>	<button>Delete</button>	1	5	0	Yes	32.000000	32.000000
	<button>Edit</button>	<button>Delete</button>	3	2	7	No	0.000000	50.306500
	<button>Edit</button>	<button>Delete</button>	4	104	1650	Yes	-23.075500	50.316500
	<button>Edit</button>	<button>Delete</button>	5	105	1700	Yes	-23.085500	50.326500
	<button>Edit</button>	<button>Delete</button>	6	106	1750	No	-23.095500	50.336500
	<button>Edit</button>	<button>Delete</button>	7	107	1800	Yes	-23.105500	50.346500
	<button>Edit</button>	<button>Delete</button>	8	108	1850	Yes	-23.115500	50.356500
	<button>Edit</button>	<button>Delete</button>	9	109	1900	No	-23.125500	50.366500
	<button>Edit</button>	<button>Delete</button>	10	110	1950	Yes	-23.135500	50.376500
	<button>Edit</button>	<button>Delete</button>	11	111	2000	Yes	-23.145500	50.386500

Shows a list of hydrants with relevant details

## Create

**Manage Hydrants**

**Add a New Hydrant**

Region ID:	<input type="text" value="2"/>
Flow Rate (GPM):	<input type="text" value="40"/>
Operational:	<input type="text" value="Yes"/>
Longitude:	<input type="text" value="40.01"/>
Latitude:	<input type="text" value="40.02"/>
<input type="button" value="Add Hydrant"/> <input type="button" value="Cancel"/>	

<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	47	2	30	Yes	30.000000	30.000000
<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	48	2	40	Yes	40.010000	40.020000

User fills out form to add a new hydrant to the database

## Update

<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	48	2	40	Yes	40.010000	40.020000
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### Edit Hydrant

ID:

Region:

Flow Rate:

Operational:

Longitude:

Latitude:

<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	48	2	40	Yes	40.010000	40.020000
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### Edit Hydrant

ID:

Region:

Flow Rate:

Operational:

Longitude:

Latitude:

<a href="#">Edit</a>	<a href="#">Delete</a>	39	6	5	Yes	4.000000	3.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	40	3	3235345	Yes	-23.045500	50.286500
<a href="#">Edit</a>	<a href="#">Delete</a>	41	3	3	Yes	0.000000	3.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	42	7	4000	No	69.000000	99.999999
<a href="#">Edit</a>	<a href="#">Delete</a>	44	5	20	No	32.200000	42.010000
<a href="#">Edit</a>	<a href="#">Delete</a>	46	3	30	Yes	30.000000	30.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	47	2	30	Yes	30.000000	30.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	48	2	500	Yes	50.000000	50.000000

User modifies hydrant flow rate, longitude and latitude

Delete

<a href="#">Edit</a>	<a href="#">Delete</a>	39	6	5	Yes	4.000000	3.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	40	3	3235345	Yes	-23.045500	50.286500
<a href="#">Edit</a>	<a href="#">Delete</a>	41	3	3	Yes	0.000000	3.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	42	7	4000	No	69.000000	99.999999
<a href="#">Edit</a>	<a href="#">Delete</a>	44	5	20	No	32.200000	42.010000
<a href="#">Edit</a>	<a href="#">Delete</a>	46	3	30	Yes	30.000000	30.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	47	2	30	Yes	30.000000	30.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	48	2	500	Yes	50.000000	50.000000

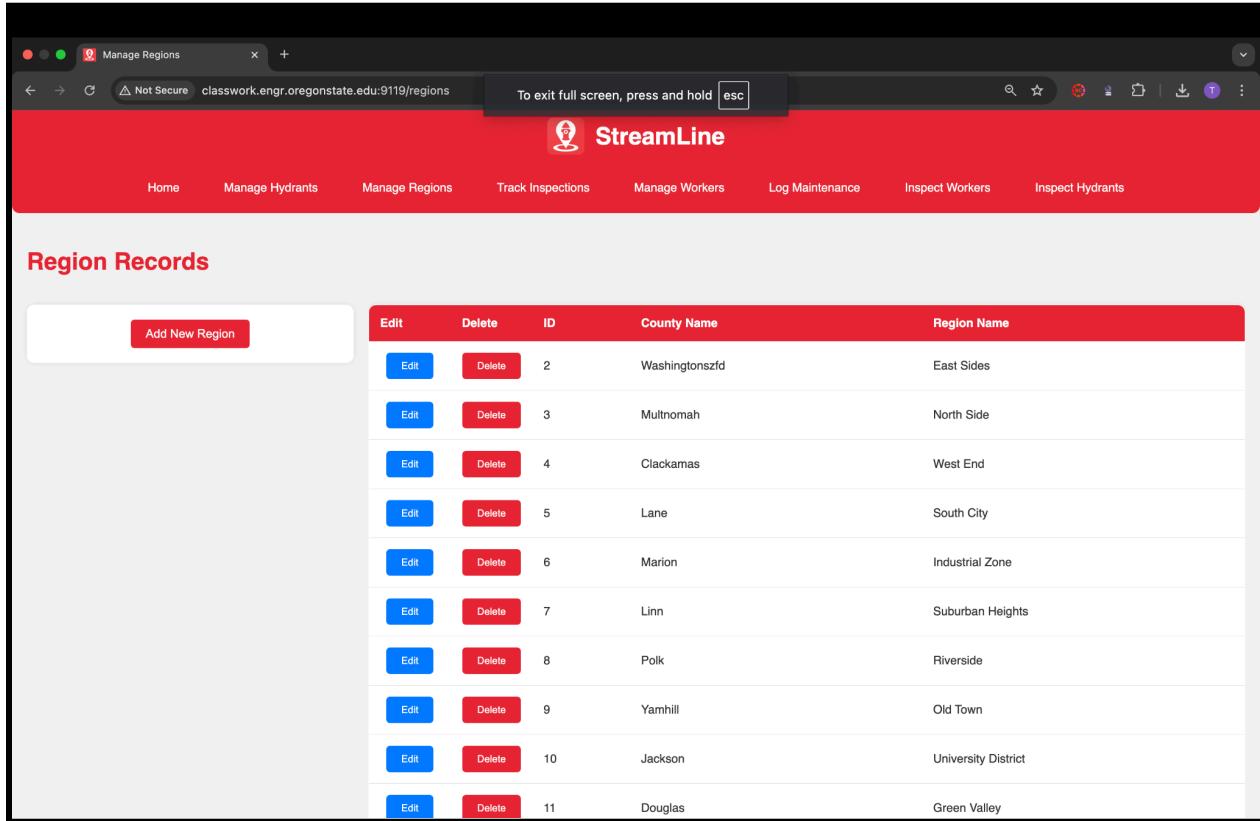
		classwork.engr.oregonstate.edu:9119 says				
		Are you sure you want to delete this hydrant?			Yes	-23.205500
					No	50.446500
<a href="#">Edit</a>	<a href="#">Delete</a>	19	2	0	<a href="#">Cancel</a>	<a href="#">OK</a>
<a href="#">Edit</a>	<a href="#">Delete</a>	35	20	0	Yes	-23.225500
<a href="#">Edit</a>	<a href="#">Delete</a>	37	3	0	No	22.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	38	3	2	No	22.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	39	6	5	Yes	4.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	40	3	3235345	Yes	-23.045500
<a href="#">Edit</a>	<a href="#">Delete</a>	41	3	3	Yes	50.286500
<a href="#">Edit</a>	<a href="#">Delete</a>	42	7	4000	No	0.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	44	5	20	No	69.000000
<a href="#">Edit</a>	<a href="#">Delete</a>	46	3	30	Yes	99.999999
<a href="#">Edit</a>	<a href="#">Delete</a>	47	2	30	Yes	32.200000
<a href="#">Edit</a>	<a href="#">Delete</a>	48	2	500	Yes	42.010000
<a href="#">Edit</a>	<a href="#">Delete</a>					

<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	38	3	2	No	4,000,000	3,000,000
<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	39	6	5	Yes	4,000,000	3,000,000
<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	40	3	3235345	Yes	-23,045500	50,286500
<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	41	3	3	Yes	0,000,000	3,000,000
<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	42	7	4000	No	69,000,000	99,999,999
<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	44	5	20	No	32,200,000	42,010,000
<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	46	3	30	Yes	30,000,000	30,000,000
<a class="button" href="#">Edit</a>	<a class="button" href="#">Delete</a>	47	2	30	Yes	30,000,000	30,000,000

User removes a hydrant from the system

# Regions

## Read



The screenshot shows a web browser window for the StreamLine application. The URL is `classwork.engr.oregonstate.edu:9119/regions`. The page title is "Manage Regions". The main content area is titled "Region Records" and displays a table of region data. The table has columns: Edit, Delete, ID, County Name, and Region Name. There are 11 rows of data, each with an "Edit" and "Delete" button. The data is as follows:

Edit	Delete	ID	County Name	Region Name
<button>Edit</button>	<button>Delete</button>	2	Washingtonzfd	East Sides
<button>Edit</button>	<button>Delete</button>	3	Multnomah	North Side
<button>Edit</button>	<button>Delete</button>	4	Clackamas	West End
<button>Edit</button>	<button>Delete</button>	5	Lane	South City
<button>Edit</button>	<button>Delete</button>	6	Marion	Industrial Zone
<button>Edit</button>	<button>Delete</button>	7	Linn	Suburban Heights
<button>Edit</button>	<button>Delete</button>	8	Polk	Riverside
<button>Edit</button>	<button>Delete</button>	9	Yamhill	Old Town
<button>Edit</button>	<button>Delete</button>	10	Jackson	University District
<button>Edit</button>	<button>Delete</button>	11	Douglas	Green Valley

Displays every region, showing county name and region name.

## Create

The screenshot shows a web-based application titled "StreamLine". The main title bar has a red background with the StreamLine logo and the word "StreamLine". Below the title bar is a navigation menu with links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. The main content area is titled "Region Records" in red. On the left, there is a modal window titled "Add a New Region" with fields for "County Name" (Kauai) and "Region Name" (Hawaii). It includes "Add Region" and "Cancel" buttons. To the right is a table with columns: Edit, Delete, ID, County Name, and Region Name. The table contains 11 rows of data.

Edit	Delete	ID	County Name	Region Name
<button>Edit</button>	<button>Delete</button>	2	Washingtonsd	East Sides
<button>Edit</button>	<button>Delete</button>	3	Multnomah	North Side
<button>Edit</button>	<button>Delete</button>	4	Clackamas	West End
<button>Edit</button>	<button>Delete</button>	5	Lane	South City
<button>Edit</button>	<button>Delete</button>	6	Marion	Industrial Zone
<button>Edit</button>	<button>Delete</button>	7	Linn	Suburban Heights
<button>Edit</button>	<button>Delete</button>	8	Polk	Riverside
<button>Edit</button>	<button>Delete</button>	9	Yamhill	Old Town
<button>Edit</button>	<button>Delete</button>	10	Jackson	University District
<button>Edit</button>	<button>Delete</button>	11	Douglas	Green Valley

This screenshot shows the same StreamLine application interface as the previous one. The "Region Records" table now contains 24 rows of data. The first 11 rows correspond to the data shown in the first screenshot. The remaining 13 rows are new and include: Yamhill (Old Town), Jackson (University District), Douglas (Green Valley), Josephine (Sunset Hills), Coosey (Lake View), Curry (Ocean Front), Klamath (Mountain Ridge), Deschutes (Central Park), Crook (Heritage Square), Jefferson (Grand Central), Wasco (City Center), Hood River (Harbor Point), test (region), and Kauai (Hawaii). The "Add New Region" form is still visible on the left side of the screen.

Edit	Delete	ID	County Name	Region Name
<button>Edit</button>	<button>Delete</button>	9	Yamhill	Old Town
<button>Edit</button>	<button>Delete</button>	10	Jackson	University District
<button>Edit</button>	<button>Delete</button>	11	Douglas	Green Valley
<button>Edit</button>	<button>Delete</button>	12	Josephine	Sunset Hills
<button>Edit</button>	<button>Delete</button>	13	Coosey	Lake View
<button>Edit</button>	<button>Delete</button>	14	Curry	Ocean Front
<button>Edit</button>	<button>Delete</button>	15	Klamath	Mountain Ridge
<button>Edit</button>	<button>Delete</button>	16	Deschutes	Central Park
<button>Edit</button>	<button>Delete</button>	17	Crook	Heritage Square
<button>Edit</button>	<button>Delete</button>	18	Jefferson	Grand Central
<button>Edit</button>	<button>Delete</button>	19	Wasco	City Center
<button>Edit</button>	<button>Delete</button>	20	Hood River	Harbor Point
<button>Edit</button>	<button>Delete</button>	22	test	region
<button>Edit</button>	<button>Delete</button>	24	Kauai	Hawaii

Form to add a new region, specifying county name and region name.

## Update

The screenshot shows a web browser window titled "Manage Regions". The main content area displays a table of regions:

ID	County Name	Region Name	Description
15	Klamath	Mountain Ridge	
16	Deschutes	Central Park	
17	Crook	Heritage Square	
18	Jefferson	Grand Central	
19	Wasco	City Center	
20	Hood River	Harbor Point	
22	test	region	
24	Kauai	Hawaii	

A modal dialog titled "Edit Region" is open, showing the current values for the selected row (ID 24):

County Name: Kauai  
Region Name: Hawaii

Buttons: Save Changes, Cancel

The screenshot shows the same web browser window after saving changes. The table now lists the region with ID 24 as having the county name "Oahu".

ID	County Name	Region Name	Description
15	Klamath	Mountain Ridge	
16	Deschutes	Central Park	
17	Crook	Heritage Square	
18	Jefferson	Grand Central	
19	Wasco	City Center	
20	Hood River	Harbor Point	
22	test	region	
24	Oahu	Hawaii	

The screenshot shows the final state of the application. The table now lists the region with ID 24 as having the county name "Oahu".

ID	County Name	Region Name	Description
9	Yamhill	Old Town	
10	Jackson	University District	
11	Douglas	Green Valley	
12	Josephine	Sunset Hills	
13	Cooksey	Lake View	
14	Curry	Ocean Front	
15	Klamath	Mountain Ridge	
16	Deschutes	Central Park	
17	Crook	Heritage Square	
18	Jefferson	Grand Central	
19	Wasco	City Center	
20	Hood River	Harbor Point	
22	test	region	
24	Oahu	Hawaii	

Lets the user rename a region or change its county association.

## Delete

A screenshot of a web browser window titled "Manage Regions". The URL is "classwork.engr.oregonstate.edu:9119/regions". A modal dialog box is centered over the page, displaying the message "classwork.engr.oregonstate.edu:9119 says Are you sure you want to delete this region?". Below the message are two buttons: "Cancel" and "OK". The main content area shows a table of region records. The first record in the table is highlighted with a gray background.

		Old Town	
		University District	
		Green Valley	
		Sunset Hills	
		Lake View	
		Ocean Front	
		Mountain Ridge	
		Central Park	
		Heritage Square	
		Grand Central	
		City Center	
		Harbor Point	
		region	
		Hawaii	

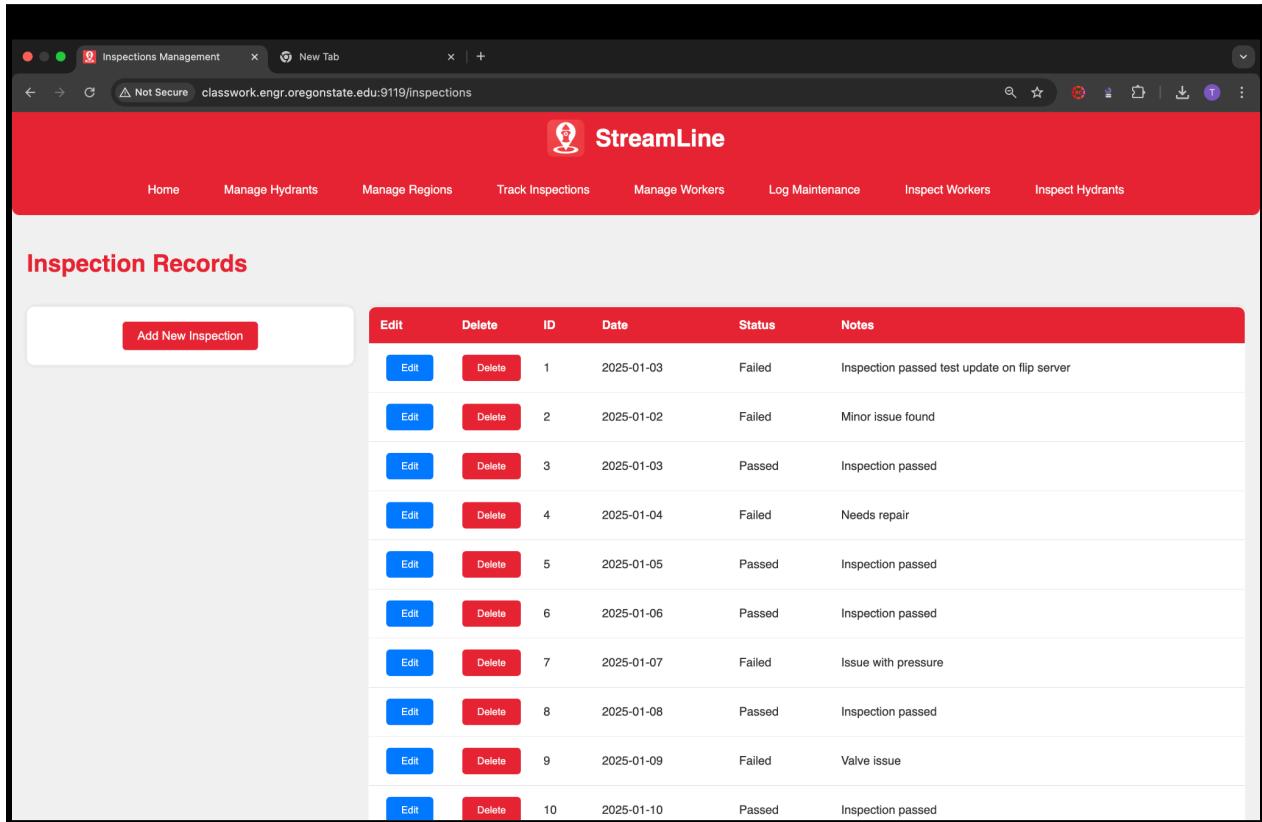
A screenshot of a web browser window titled "Manage Regions". The URL is "classwork.engr.oregonstate.edu:9119/regions". The main content area shows a table of region records. The first record from the previous screenshot is missing, indicating it has been deleted. The remaining records are identical to the ones shown in the first screenshot.

		Riverside	
		Old Town	
		University District	
		Green Valley	
		Sunset Hills	
		Lake View	
		Ocean Front	
		Mountain Ridge	
		Central Park	
		Heritage Square	
		Grand Central	
		City Center	
		Harbor Point	
		region	

Removes a region record from the database.

# Inspections

## Read



The screenshot shows a web browser window for 'StreamLine' titled 'Inspection Records'. The page has a red header bar with the StreamLine logo and navigation links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. Below the header is a white content area with a table of inspection records. A red button labeled 'Add New Inspection' is located on the left side of the table. The table has columns for Edit, Delete, ID, Date, Status, and Notes. The data is as follows:

Edit	Delete	ID	Date	Status	Notes
<button>Edit</button>	<button>Delete</button>	1	2025-01-03	Failed	Inspection passed test update on flip server
<button>Edit</button>	<button>Delete</button>	2	2025-01-02	Failed	Minor issue found
<button>Edit</button>	<button>Delete</button>	3	2025-01-03	Passed	Inspection passed
<button>Edit</button>	<button>Delete</button>	4	2025-01-04	Failed	Needs repair
<button>Edit</button>	<button>Delete</button>	5	2025-01-05	Passed	Inspection passed
<button>Edit</button>	<button>Delete</button>	6	2025-01-06	Passed	Inspection passed
<button>Edit</button>	<button>Delete</button>	7	2025-01-07	Failed	Issue with pressure
<button>Edit</button>	<button>Delete</button>	8	2025-01-08	Passed	Inspection passed
<button>Edit</button>	<button>Delete</button>	9	2025-01-09	Failed	Valve issue
<button>Edit</button>	<button>Delete</button>	10	2025-01-10	Passed	Inspection passed

Shows each inspection record, including date, completion status, and any notes.

## Create

The screenshot shows a web application interface for StreamLine Inspections Management. At the top, there is a navigation bar with links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. Below the navigation bar, the title "Inspection Records" is displayed in red. On the left, a modal window titled "Add Inspection" is open, containing fields for Inspection Date (03/17/2025), Status (Passed), and Notes (Flow rate too low). It also has "Save Inspection" and "Cancel" buttons. To the right of the modal is a table listing 10 inspection records:

	Edit	Delete	ID	Date	Status	Notes
1	<a href="#">Edit</a>	<a href="#">Delete</a>	1	2025-01-03	Failed	Inspection passed test update on flip server
2	<a href="#">Edit</a>	<a href="#">Delete</a>	2	2025-01-02	Failed	Minor issue found
3	<a href="#">Edit</a>	<a href="#">Delete</a>	3	2025-01-03	Passed	Inspection passed
4	<a href="#">Edit</a>	<a href="#">Delete</a>	4	2025-01-04	Failed	Needs repair
5	<a href="#">Edit</a>	<a href="#">Delete</a>	5	2025-01-05	Passed	Inspection passed
6	<a href="#">Edit</a>	<a href="#">Delete</a>	6	2025-01-06	Passed	Inspection passed
7	<a href="#">Edit</a>	<a href="#">Delete</a>	7	2025-01-07	Failed	Issue with pressure
8	<a href="#">Edit</a>	<a href="#">Delete</a>	8	2025-01-08	Passed	Inspection passed
9	<a href="#">Edit</a>	<a href="#">Delete</a>	9	2025-01-09	Failed	Valve issue
10	<a href="#">Edit</a>	<a href="#">Delete</a>	10	2025-01-10	Passed	Inspection passed

This screenshot shows the same StreamLine Inspections Management interface. A modal window titled "Add New Inspection" is partially visible on the left. The main area displays a table of inspection records, which now include an additional row at the bottom:

23	<a href="#">Edit</a>	<a href="#">Delete</a>	23	2025-03-17	Passed	Flow rate too low
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Form to log a new inspection for hydrants, specifying date, status, and notes.

## Update

The screenshot shows a web browser window titled "Inspections Management". The URL is "classwork.engr.oregonstate.edu:9119/inspections". A modal dialog box is open, titled "Edit Inspection". Inside the dialog, there are fields for "Inspection Date" (set to "03/07/2025"), "Status" (set to "Failed"), and "Notes" (containing the text "Flow rate not working"). At the bottom of the dialog are "Save Changes" and "Cancel" buttons.

	Edit	Delete	Date	Status	Notes
16	2025-01-16	Passed	Inspection passed		
17	2025-01-17	Failed	Operational issue		
18	2025-01-18	Passed	Inspection passed		
19	2025-01-19	Failed	Repair needed		
20	2025-03-10	Failed	Operational issue.		
23	2025-03-17	Passed	Flow rate too low		

The screenshot shows the same web browser window after changes have been saved. The modal dialog is no longer visible. The inspection list has been updated, reflecting the changes made in the dialog. The last inspection entry now includes the note "Flow rate not working".

	Edit	Delete	Date	Status	Notes
8	2025-01-08	Passed	Inspection passed		
9	2025-01-09	Failed	Valve issue		
10	2025-01-10	Passed	Inspection passed		
11	2025-01-11	Passed	Inspection passed		
12	2025-01-12	Failed	Minor leak		
13	2025-01-13	Passed	Inspection passed		
14	2025-01-14	Failed	Needs follow-up		
15	2005-06-08	Passed	Inspection passed		
16	2025-01-16	Passed	Inspection passed		
17	2025-01-17	Failed	Operational issue		
18	2025-01-18	Passed	Inspection passed		
19	2025-01-19	Failed	Repair needed		
20	2025-03-10	Failed	Operational issue.		
23	2025-03-07	Failed	Flow rate not working		

Allows editing inspection details (e.g., mark an inspection as complete, add notes).

## Delete

A screenshot of a web browser window titled "Inspections Management". The URL is "Not Secure classwork.engr.oregonstate.edu:9119/inspections". A modal dialog box is centered over the page, displaying the message "classwork.engr.oregonstate.edu:9119 says Are you sure you want to delete this inspection?". Below the message are two buttons: "Cancel" and "OK". The main content area shows a table of inspection records. The last row of the table is highlighted with a gray background. The table has columns for "Edit" (blue button), "Delete" (red button), "ID", "Date", "Status", and "Issue". The last row (highlighted) contains ID 23, Date 2025-03-07, Status Failed, and Issue Flow rate not working.

Edit	Delete	ID	Date	Status	Issue
10	2025-01-10	Passed	Inspection passed		
11	2025-01-11	Passed	Inspection passed		
12	2025-01-12	Failed	Minor leak		
13	2025-01-13	Passed	Inspection passed		
14	2025-01-14	Failed	Needs follow-up		
15	2005-06-08	Passed	Inspection passed		
16	2025-01-16	Passed	Inspection passed		
17	2025-01-17	Failed	Operational issue		
18	2025-01-18	Passed	Inspection passed		
19	2025-01-19	Failed	Repair needed		
20	2025-03-10	Failed	Operational issue.		
23	2025-03-07	Failed	Flow rate not working		

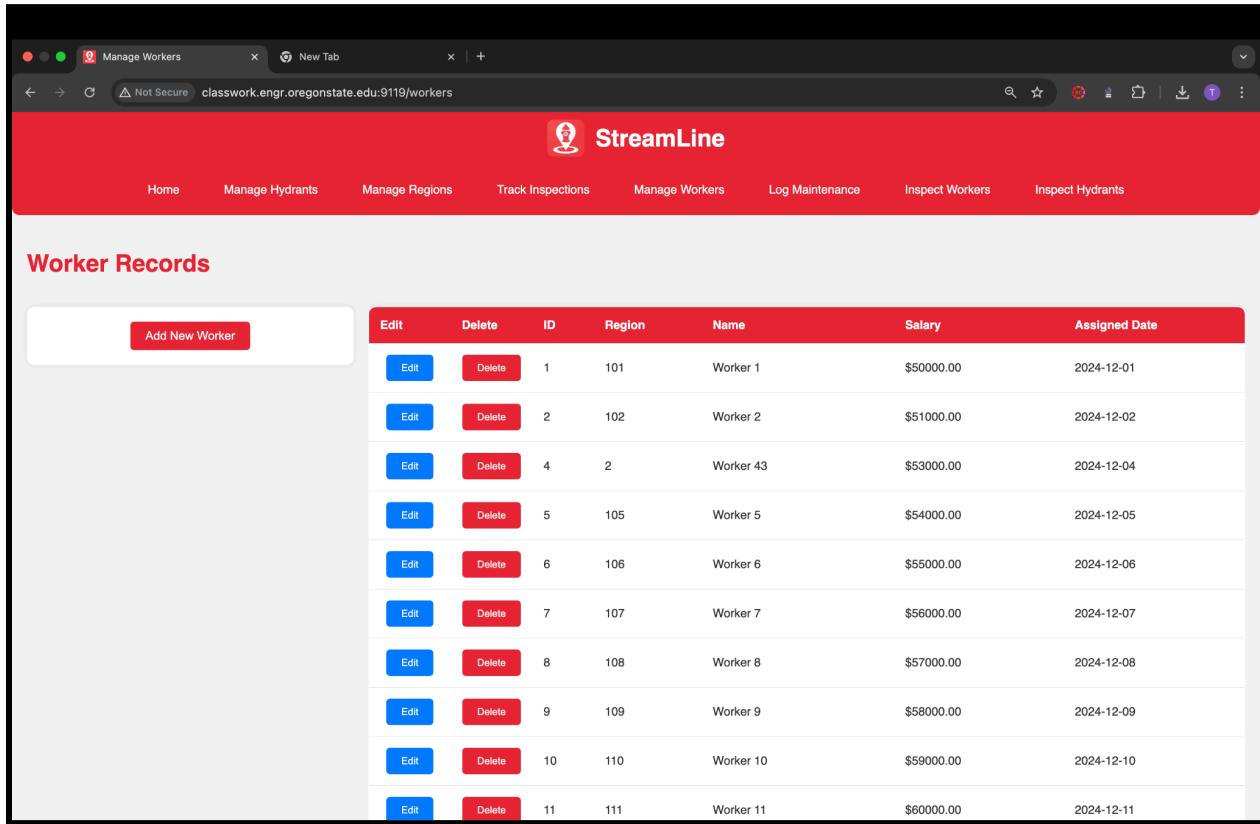
A screenshot of the same web browser window after the deletion. The modal dialog is no longer present. The table of inspection records now has one less row, with the last row (ID 23) removed. The remaining rows are identical to the ones in the previous screenshot.

Edit	Delete	ID	Date	Status	Issue
7	2025-01-07	Failed	Issue with pressure		
8	2025-01-08	Passed	Inspection passed		
9	2025-01-09	Failed	Valve issue		
10	2025-01-10	Passed	Inspection passed		
11	2025-01-11	Passed	Inspection passed		
12	2025-01-12	Failed	Minor leak		
13	2025-01-13	Passed	Inspection passed		
14	2025-01-14	Failed	Needs follow-up		
15	2005-06-08	Passed	Inspection passed		
16	2025-01-16	Passed	Inspection passed		
17	2025-01-17	Failed	Operational issue		
18	2025-01-18	Passed	Inspection passed		
19	2025-01-19	Failed	Repair needed		
20	2025-03-10	Failed	Operational issue.		

Removes an inspection record from the system.

# Workers

## Read



The screenshot shows a web browser window for the StreamLine application. The title bar says "Manage Workers". The address bar shows "Not Secure classwork.engr.oregonstate.edu:9119/workers". The header has a red background with the StreamLine logo and navigation links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants.

The main content area is titled "Worker Records" in red. It features a table with 11 rows of worker data. Each row includes edit and delete buttons. The columns are: Edit, Delete, ID, Region, Name, Salary, and Assigned Date.

Edit	Delete	ID	Region	Name	Salary	Assigned Date
<button>Edit</button>	<button>Delete</button>	1	101	Worker 1	\$50000.00	2024-12-01
<button>Edit</button>	<button>Delete</button>	2	102	Worker 2	\$51000.00	2024-12-02
<button>Edit</button>	<button>Delete</button>	4	2	Worker 43	\$53000.00	2024-12-04
<button>Edit</button>	<button>Delete</button>	5	105	Worker 5	\$54000.00	2024-12-05
<button>Edit</button>	<button>Delete</button>	6	106	Worker 6	\$55000.00	2024-12-06
<button>Edit</button>	<button>Delete</button>	7	107	Worker 7	\$56000.00	2024-12-07
<button>Edit</button>	<button>Delete</button>	8	108	Worker 8	\$57000.00	2024-12-08
<button>Edit</button>	<button>Delete</button>	9	109	Worker 9	\$58000.00	2024-12-09
<button>Edit</button>	<button>Delete</button>	10	110	Worker 10	\$59000.00	2024-12-10
<button>Edit</button>	<button>Delete</button>	11	111	Worker 11	\$60000.00	2024-12-11

Lists each worker, along with region, salary, and assignment date.

# Create

Edit	Delete	ID	Region	Name	Salary	Assigned Date
<button>Edit</button>	<button>Delete</button>	1	101	Worker 1	\$50000.00	2024-12-01
<button>Edit</button>	<button>Delete</button>	2	102	Worker 2	\$51000.00	2024-12-02
<button>Edit</button>	<button>Delete</button>	4	2	Worker 43	\$53000.00	2024-12-04
<button>Edit</button>	<button>Delete</button>	5	105	Worker 5	\$54000.00	2024-12-05
<button>Edit</button>	<button>Delete</button>	6	106	Worker 6	\$55000.00	2024-12-06
<button>Edit</button>	<button>Delete</button>	7	107	Worker 7	\$56000.00	2024-12-07
<button>Edit</button>	<button>Delete</button>	8	108	Worker 8	\$57000.00	2024-12-08
<button>Edit</button>	<button>Delete</button>	9	109	Worker 9	\$58000.00	2024-12-09
<button>Edit</button>	<button>Delete</button>	10	110	Worker 10	\$59000.00	2024-12-10
<button>Edit</button>	<button>Delete</button>	11	111	Worker 11	\$60000.00	2024-12-11

<button>Add New Worker</button>	<button>Edit</button>	<button>Delete</button>	12	112	Worker 12	\$61000.00	2024-12-12
	<button>Edit</button>	<button>Delete</button>	13	113	Worker 13	\$62000.00	2024-12-13
	<button>Edit</button>	<button>Delete</button>	14	114	Worker 14	\$63000.00	2024-12-14
	<button>Edit</button>	<button>Delete</button>	15	115	Worker 15	\$64000.00	2024-12-15
	<button>Edit</button>	<button>Delete</button>	16	116	Worker 16	\$65000.00	2024-12-16
	<button>Edit</button>	<button>Delete</button>	17	117	Worker 17	\$66000.00	2024-12-17
	<button>Edit</button>	<button>Delete</button>	18	118	Worker 18	\$67000.00	2024-12-18
	<button>Edit</button>	<button>Delete</button>	19	119	Worker 19	\$68000.00	2024-12-19
	<button>Edit</button>	<button>Delete</button>	20	120	Worker 20	\$69000.00	2024-12-20
	<button>Edit</button>	<button>Delete</button>	21	17	Adam Danielson	\$500.00	2025-03-10
	<button>Edit</button>	<button>Delete</button>	22	2	Troy Diaz	\$99999999.99	2025-03-10
	<button>Edit</button>	<button>Delete</button>	23	2	Nico Johnson	\$2134.00	1943-06-10
	<button>Edit</button>	<button>Delete</button>	24	2	tesret234234234	\$43.00	2025-03-12
	<button>Edit</button>	<button>Delete</button>	26	20	Troy Diaz	\$99999999.99	2025-03-17

Form to add a new worker, specifying name, salary, region assignment, etc.

## Update

The screenshot shows a web application titled "Manage Workers" on a Mac OS X desktop. The main page displays a table of workers with columns for ID, Age, Name, Salary, and Assigned Date. An "Edit" button is present for each worker. A modal dialog box titled "Edit Worker" is open, allowing modification of worker details. The form fields include Region (Wasco - City Center), Name (Troy Diaz), Salary (\$10), and Assigned Date (03/07/2025). Buttons for "Save Changes" and "Cancel" are at the bottom.

ID	Age	Name	Salary	Assigned Date
21	17	Adam Danielson	\$500.00	2025-03-10
22	2	Troy Diaz	\$99999999.99	2025-03-10
23	2	Nico Johnson	\$2134.00	1943-06-10
24	2	tesret234234234	\$43.00	2025-03-12
26	20	Troy Diaz	\$99999999.99	2025-03-17

The screenshot shows the same "Manage Workers" application. The main page lists 14 workers with their details: ID, Age, Name, Salary, and Assigned Date. The "Edit" button is available for each worker. An "Add New Worker" button is located in the top-left corner of the main content area.

ID	Age	Name	Salary	Assigned Date
12	112	Worker 12	\$61000.00	2024-12-12
13	113	Worker 13	\$62000.00	2024-12-13
14	114	Worker 14	\$63000.00	2024-12-14
15	115	Worker 15	\$64000.00	2024-12-15
16	116	Worker 16	\$65000.00	2024-12-16
17	117	Worker 17	\$66000.00	2024-12-17
18	118	Worker 18	\$67000.00	2024-12-18
19	119	Worker 19	\$68000.00	2024-12-19
20	120	Worker 20	\$69000.00	2024-12-20
21	17	Adam Danielson	\$500.00	2025-03-10
22	2	Troy Diaz	\$99999999.99	2025-03-10
23	2	Nico Johnson	\$2134.00	1943-06-10
24	2	tesret234234234	\$43.00	2025-03-12
26	19	Troy Diaz	\$10.00	2025-03-07

Used to modify a worker's details, such as salary or region assignment.

## Delete

A screenshot of a web browser window titled "Manage Workers". The URL is "classwork.engr.oregonstate.edu:9119/workers". A modal dialog box is centered over the page, displaying the message "classwork.engr.oregonstate.edu:9119 says Are you sure you want to delete this worker?". Below the message are two buttons: "Cancel" (blue) and "OK" (white). The background shows a table of worker records with columns: Edit, Delete, ID, Worker ID, Name, Hourly Rate, and Date. One row in the table has a red "Delete" button.

Edit	Delete	ID	Worker ID	Name	Hourly Rate	Date
Edit	Delete	14	114	Worker 14	\$61000.00	2024-12-12
Edit	Delete	15	115	Worker 15	\$62000.00	2024-12-13
Edit	Delete	16	116	Worker 16	\$63000.00	2024-12-14
Edit	Delete	17	117	Worker 17	\$64000.00	2024-12-15
Edit	Delete	18	118	Worker 18	\$65000.00	2024-12-16
Edit	Delete	19	119	Worker 19	\$66000.00	2024-12-17
Edit	Delete	20	120	Worker 20	\$67000.00	2024-12-18
Edit	Delete	21	17	Adam Danielson	\$68000.00	2024-12-19
Edit	Delete	22	2	Troy Diaz	\$69000.00	2024-12-20
Edit	Delete	23	2	Nico Johnson	\$70000.00	2024-12-21
Edit	Delete	24	2	tesret234234234	\$71000.00	2024-12-22
Edit	Delete	26	19	Troy Diaz	\$72000.00	2024-12-23

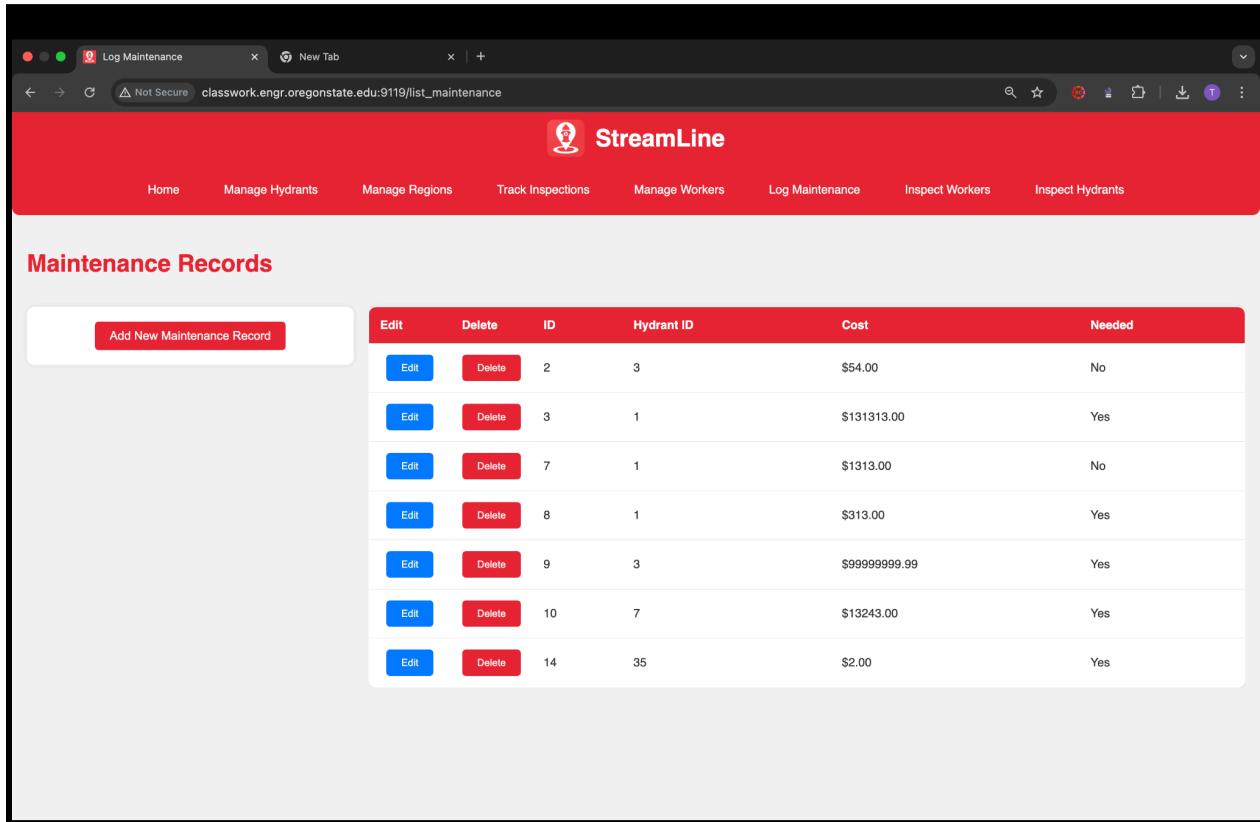
A screenshot of the same web browser window after the deletion. The modal dialog is no longer present. The table now shows 14 rows of worker records, starting from ID 11. The last row (ID 26) is highlighted with a gray background, indicating it was the selected record for deletion.

Edit	Delete	ID	Worker ID	Name	Hourly Rate	Date
Edit	Delete	11	111	Worker 11	\$60000.00	2024-12-11
Edit	Delete	12	112	Worker 12	\$61000.00	2024-12-12
Edit	Delete	13	113	Worker 13	\$62000.00	2024-12-13
Edit	Delete	14	114	Worker 14	\$63000.00	2024-12-14
Edit	Delete	15	115	Worker 15	\$64000.00	2024-12-15
Edit	Delete	16	116	Worker 16	\$65000.00	2024-12-16
Edit	Delete	17	117	Worker 17	\$66000.00	2024-12-17
Edit	Delete	18	118	Worker 18	\$67000.00	2024-12-18
Edit	Delete	19	119	Worker 19	\$68000.00	2024-12-19
Edit	Delete	20	120	Worker 20	\$69000.00	2024-12-20
Edit	Delete	21	17	Adam Danielson	\$70000.00	2024-12-21
Edit	Delete	22	2	Troy Diaz	\$71000.00	2024-12-22
Edit	Delete	23	2	Nico Johnson	\$72000.00	2024-12-23
Edit	Delete	24	2	tesret234234234	\$73000.00	2024-12-24
Edit	Delete	26	19	Troy Diaz	\$74000.00	2024-12-25

Eliminates a worker record from the database.

# Maintenance

## Read



The screenshot shows a web browser window for the StreamLine application. The title bar reads "Log Maintenance" and the address bar shows "Not Secure classwork.engr.oregonstate.edu:9119/list\_maintenance". The main header features the StreamLine logo and navigation links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. Below the header, a section titled "Maintenance Records" displays a table of service logs. A red button labeled "Add New Maintenance Record" is located at the top left of the table area. The table has columns for Edit, Delete, ID, Hydrant ID, Cost, and Needed. The data is as follows:

Edit	Delete	ID	Hydrant ID	Cost	Needed
<button>Edit</button>	<button>Delete</button>	2	3	\$54.00	No
<button>Edit</button>	<button>Delete</button>	3	1	\$131313.00	Yes
<button>Edit</button>	<button>Delete</button>	7	1	\$1313.00	No
<button>Edit</button>	<button>Delete</button>	8	1	\$313.00	Yes
<button>Edit</button>	<button>Delete</button>	9	3	\$99999999.99	Yes
<button>Edit</button>	<button>Delete</button>	10	7	\$13243.00	Yes
<button>Edit</button>	<button>Delete</button>	14	35	\$2.00	Yes

Shows all maintenance records, including which hydrant was serviced, the cost, and whether more maintenance is needed.

## Create

The screenshot shows the StreamLine software interface. The main title is "StreamLine". Below it is a navigation bar with links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. The current page is "Maintenance Records". On the left, there is a form titled "Add a New Maintenance Record" with fields for Hydrant ID (set to 6), Cost (set to 31231), and Needed (set to No). On the right, there is a table listing maintenance records:

	Edit	Delete	ID	Hydrant ID	Cost	Needed
	<button>Edit</button>	<button>Delete</button>	2	3	\$54.00	No
	<button>Edit</button>	<button>Delete</button>	3	1	\$131313.00	Yes
	<button>Edit</button>	<button>Delete</button>	7	1	\$1313.00	No
	<button>Edit</button>	<button>Delete</button>	8	1	\$313.00	Yes
	<button>Edit</button>	<button>Delete</button>	9	3	\$99999999.99	Yes
	<button>Edit</button>	<button>Delete</button>	10	7	\$13243.00	Yes
	<button>Edit</button>	<button>Delete</button>	14	35	\$2.00	Yes

The screenshot shows the StreamLine software interface, identical to the one above but with a new row added to the maintenance records table.

	Edit	Delete	ID	Hydrant ID	Cost	Needed
	<button>Edit</button>	<button>Delete</button>	2	3	\$54.00	No
	<button>Edit</button>	<button>Delete</button>	3	1	\$131313.00	Yes
	<button>Edit</button>	<button>Delete</button>	7	1	\$1313.00	No
	<button>Edit</button>	<button>Delete</button>	8	1	\$313.00	Yes
	<button>Edit</button>	<button>Delete</button>	9	3	\$99999999.99	Yes
	<button>Edit</button>	<button>Delete</button>	10	7	\$13243.00	Yes
	<button>Edit</button>	<button>Delete</button>	14	35	\$2.00	Yes
	<button>Edit</button>	<button>Delete</button>	17	6	\$31231.00	No

Form to record a new maintenance event, linking it to a hydrant and specifying cost.

## Update

A screenshot of a web browser window titled "Log Maintenance". The URL is "classwork.engr.oregonstate.edu:9119/list\_maintenance". A modal dialog box is open, titled "Edit Maintenance Record". It contains fields for Hydrant ID (set to 6), Cost (set to 333333), and Needed (set to Yes). There are "Save Changes" and "Cancel" buttons at the bottom.

Edit	Delete	ID	Hydrant ID	Cost	Needed
3	1	\$131313.00	Yes		
7	1	\$1313.00	No		
8	1	\$313.00	Yes		
9	3	\$99999999.99	Yes		
10	7	\$13243.00	Yes		
14	35	\$2.00	Yes		
17	6	\$31231.00	No		

A screenshot of the StreamLine application. The top navigation bar includes links for Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. The main content area is titled "Maintenance Records". It features a table with columns: Edit, Delete, ID, Hydrant ID, Cost, and Needed. The table lists the same maintenance records as the previous screenshot, with the last record (ID 17) highlighted in grey.

Edit	Delete	ID	Hydrant ID	Cost	Needed
2	3	\$54.00	No		
3	1	\$131313.00	Yes		
7	1	\$1313.00	No		
8	1	\$313.00	Yes		
9	3	\$99999999.99	Yes		
10	7	\$13243.00	Yes		
14	35	\$2.00	Yes		
17	6	\$333333.00	Yes		

Allows updating the maintenance cost or changing whether maintenance is needed.

## Delete

A screenshot of a web browser window titled "Log Maintenance". The URL is "classwork.engr.oregonstate.edu:9119/list\_maintenance". A black confirmation dialog box is centered over the page, containing the text "classwork.engr.oregonstate.edu:9119 says" and "Are you sure you want to delete this record?". Below the dialog are two buttons: "Cancel" and "OK". The main content area shows a table titled "Maintenance Records" with columns: Edit, Delete, ID, Hydrant ID, Cost, and Needed. The table contains several rows of data.

Edit	Delete	ID	Hydrant ID	Cost	Needed
<button>Edit</button>	<button>Delete</button>	2	3	\$54.00	No
<button>Edit</button>	<button>Delete</button>	3	1	\$131313.00	Yes
<button>Edit</button>	<button>Delete</button>	7	1	\$1313.00	No
<button>Edit</button>	<button>Delete</button>	8	1	\$313.00	Yes
<button>Edit</button>	<button>Delete</button>	9	3	\$99999999.99	Yes
<button>Edit</button>	<button>Delete</button>	10	7	\$13243.00	Yes
<button>Edit</button>	<button>Delete</button>	14	35	\$2.00	Yes
<button>Edit</button>	<button>Delete</button>	17	6	\$333333.00	Yes

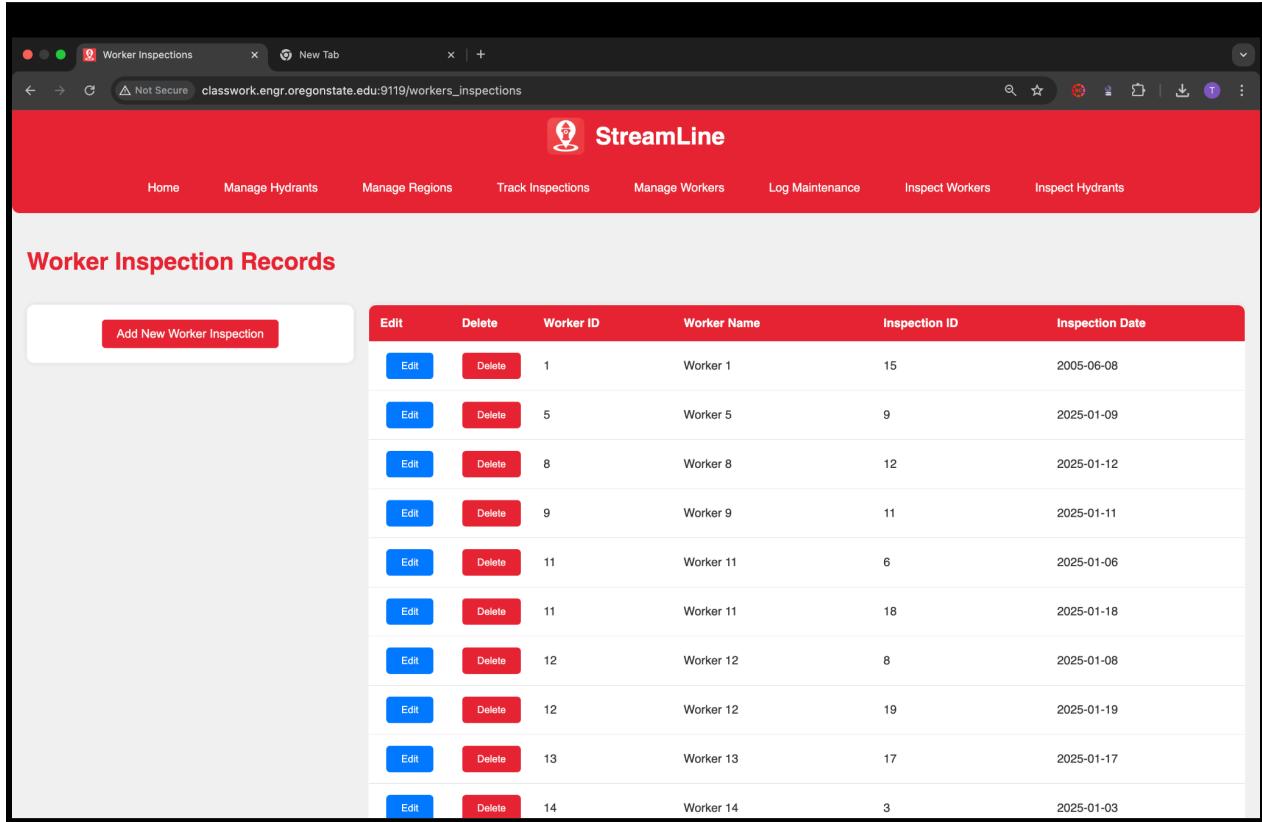
A screenshot of a web browser window titled "Log Maintenance". The URL is "classwork.engr.oregonstate.edu:9119/list\_maintenance". The page title "StreamLine" is visible at the top. The main content area shows a table titled "Maintenance Records" with columns: Edit, Delete, ID, Hydrant ID, Cost, and Needed. The table contains several rows of data, identical to the one in the previous screenshot.

Edit	Delete	ID	Hydrant ID	Cost	Needed
<button>Edit</button>	<button>Delete</button>	2	3	\$54.00	No
<button>Edit</button>	<button>Delete</button>	3	1	\$131313.00	Yes
<button>Edit</button>	<button>Delete</button>	7	1	\$1313.00	No
<button>Edit</button>	<button>Delete</button>	8	1	\$313.00	Yes
<button>Edit</button>	<button>Delete</button>	9	3	\$99999999.99	Yes
<button>Edit</button>	<button>Delete</button>	10	7	\$13243.00	Yes
<button>Edit</button>	<button>Delete</button>	14	35	\$2.00	Yes

Removes a maintenance record from the system.

# Inspect Workers

## Read



The screenshot shows a web browser window for the StreamLine application. The URL is `classwork.engr.oregonstate.edu:9119/worker_inspections`. The page title is "Worker Inspection Records". The header includes the StreamLine logo and navigation links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. A red button on the left says "Add New Worker Inspection". The main content is a table with columns: Edit, Delete, Worker ID, Worker Name, Inspection ID, and Inspection Date. The data is as follows:

Edit	Delete	Worker ID	Worker Name	Inspection ID	Inspection Date
<button>Edit</button>	<button>Delete</button>	1	Worker 1	15	2005-06-08
<button>Edit</button>	<button>Delete</button>	5	Worker 5	9	2025-01-09
<button>Edit</button>	<button>Delete</button>	8	Worker 8	12	2025-01-12
<button>Edit</button>	<button>Delete</button>	9	Worker 9	11	2025-01-11
<button>Edit</button>	<button>Delete</button>	11	Worker 11	6	2025-01-06
<button>Edit</button>	<button>Delete</button>	11	Worker 11	18	2025-01-18
<button>Edit</button>	<button>Delete</button>	12	Worker 12	8	2025-01-08
<button>Edit</button>	<button>Delete</button>	12	Worker 12	19	2025-01-19
<button>Edit</button>	<button>Delete</button>	13	Worker 13	17	2025-01-17
<button>Edit</button>	<button>Delete</button>	14	Worker 14	3	2025-01-03

Lists all assignments linking workers to their inspections.

## Create

The screenshot shows a web browser window for StreamLine. The main content area displays a table titled "Worker Inspection Records" with columns: Edit, Delete, Worker ID, Worker Name, Inspection ID, and Inspection Date. The table lists 14 rows of data. On the left side, there is a modal dialog titled "Add Worker Inspection" with fields for "Worker" (set to "Worker 7 (ID: 7)") and "Inspection" (set to "Inspection 4 on 2025-01-04"). It also contains "Save Inspection" and "Cancel" buttons.

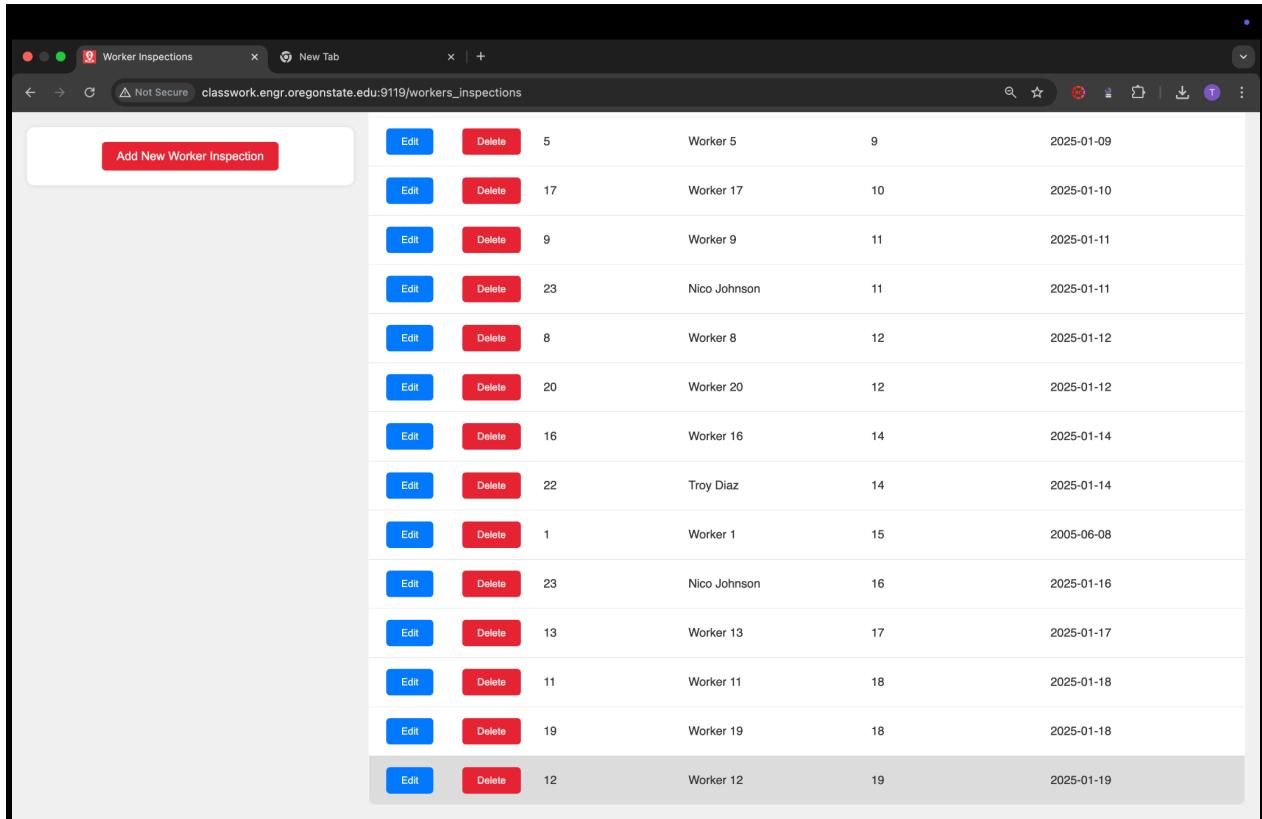
Edit	Delete	Worker ID	Worker Name	Inspection ID	Inspection Date
<button>Edit</button>	<button>Delete</button>	1	Worker 1	15	2005-06-08
<button>Edit</button>	<button>Delete</button>	5	Worker 5	9	2025-01-09
<button>Edit</button>	<button>Delete</button>	8	Worker 8	12	2025-01-12
<button>Edit</button>	<button>Delete</button>	9	Worker 9	11	2025-01-11
<button>Edit</button>	<button>Delete</button>	11	Worker 11	6	2025-01-06
<button>Edit</button>	<button>Delete</button>	11	Worker 11	18	2025-01-18
<button>Edit</button>	<button>Delete</button>	12	Worker 12	8	2025-01-08
<button>Edit</button>	<button>Delete</button>	12	Worker 12	19	2025-01-19
<button>Edit</button>	<button>Delete</button>	13	Worker 13	17	2025-01-17
<button>Edit</button>	<button>Delete</button>	14	Worker 14	3	2025-01-03

The screenshot shows a web browser window for StreamLine. The main content area displays a table titled "Worker Inspection Records" with columns: Edit, Delete, Worker ID, Worker Name, Inspection ID, and Inspection Date. The table lists 15 rows of data. On the left side, there is a button labeled "Add New Worker Inspection".

Edit	Delete	Worker ID	Worker Name	Inspection ID	Inspection Date
<button>Edit</button>	<button>Delete</button>	5	Worker 5	9	2025-01-09
<button>Edit</button>	<button>Delete</button>	17	Worker 17	10	2025-01-10
<button>Edit</button>	<button>Delete</button>	9	Worker 9	11	2025-01-11
<button>Edit</button>	<button>Delete</button>	23	Nico Johnson	11	2025-01-11
<button>Edit</button>	<button>Delete</button>	8	Worker 8	12	2025-01-12
<button>Edit</button>	<button>Delete</button>	20	Worker 20	12	2025-01-12
<button>Edit</button>	<button>Delete</button>	16	Worker 16	14	2025-01-14
<button>Edit</button>	<button>Delete</button>	1	Worker 1	15	2005-06-08
<button>Edit</button>	<button>Delete</button>	23	Nico Johnson	16	2025-01-16
<button>Edit</button>	<button>Delete</button>	13	Worker 13	17	2025-01-17
<button>Edit</button>	<button>Delete</button>	11	Worker 11	18	2025-01-18
<button>Edit</button>	<button>Delete</button>	19	Worker 19	18	2025-01-18
<button>Edit</button>	<button>Delete</button>	12	Worker 12	19	2025-01-19
<button>Edit</button>	<button>Delete</button>	24	tesret234234234	20	2025-03-10

Form to assign a worker to an inspection.

## Update



A screenshot of a web browser window titled "Worker Inspections". The address bar shows "Not Secure classwork.engr.oregonstate.edu:9119/worker\_inspections". The page displays a table of worker inspections with columns for ID, Worker ID, Worker Name, Age, and Date. A red button labeled "Add New Worker Inspection" is visible on the left. Each row has "Edit" and "Delete" buttons.

<a href="#">Edit</a>	<a href="#">Delete</a>	ID	Worker Name	Age	Date
<a href="#">Edit</a>	<a href="#">Delete</a>	5	Worker 5	9	2025-01-09
<a href="#">Edit</a>	<a href="#">Delete</a>	17	Worker 17	10	2025-01-10
<a href="#">Edit</a>	<a href="#">Delete</a>	9	Worker 9	11	2025-01-11
<a href="#">Edit</a>	<a href="#">Delete</a>	23	Nico Johnson	11	2025-01-11
<a href="#">Edit</a>	<a href="#">Delete</a>	8	Worker 8	12	2025-01-12
<a href="#">Edit</a>	<a href="#">Delete</a>	20	Worker 20	12	2025-01-12
<a href="#">Edit</a>	<a href="#">Delete</a>	16	Worker 16	14	2025-01-14
<a href="#">Edit</a>	<a href="#">Delete</a>	22	Troy Diaz	14	2025-01-14
<a href="#">Edit</a>	<a href="#">Delete</a>	1	Worker 1	15	2005-06-08
<a href="#">Edit</a>	<a href="#">Delete</a>	23	Nico Johnson	16	2025-01-16
<a href="#">Edit</a>	<a href="#">Delete</a>	13	Worker 13	17	2025-01-17
<a href="#">Edit</a>	<a href="#">Delete</a>	11	Worker 11	18	2025-01-18
<a href="#">Edit</a>	<a href="#">Delete</a>	19	Worker 19	18	2025-01-18
<a href="#">Edit</a>	<a href="#">Delete</a>	12	Worker 12	19	2025-01-19

Reassigns a worker to a different inspection or updates an existing assignment. (Demonstrates M:N update.)

## Delete

A screenshot of a web browser window titled "Worker Inspections". The address bar shows "Not Secure classwork.engr.oregonstate.edu:9119/worker\_inspections". The main content area displays a table of data with columns: Worker ID, Worker Name, Inspection ID, Inspection Date, and Inspection Type. A modal dialog box is overlaid on the table, centered in the middle. The dialog has a black background with white text. It says "classwork.engr.oregonstate.edu:9119 says" at the top, followed by "Are you sure you want to delete this record?". At the bottom of the dialog are two buttons: "Cancel" (blue) and "OK" (red).

9	Worker 9	9	2025-01-09
10	Nico Johnson	10	2025-01-10
11	Worker 8	11	2025-01-11
12	Worker 20	12	2025-01-12
14	Worker 16	14	2025-01-14
14	Troy Diaz	14	2025-01-14
15	Worker 1	15	2005-06-08
16	Nico Johnson	16	2025-01-16
17	Worker 13	17	2025-01-17
18	Worker 11	18	2025-01-18
18	Worker 19	18	2025-01-18
19	Worker 12	19	2025-01-19

Removes a link between a worker and an inspection. (Demonstrates M:N delete.)

# Inspect Hydrants

## Read

The screenshot shows a web application interface for StreamLine. At the top, there is a red header bar with the StreamLine logo and several navigation links: Home, Manage Hydrants, Manage Regions, Track Inspections, Manage Workers, Log Maintenance, Inspect Workers, and Inspect Hydrants. Below the header, the main content area has a title "Hydrant Inspection Records". On the left side of this area, there is a button labeled "Add New Hydrant Inspection". The central part of the screen is a table with two columns: "Hydrant ID" and "Inspection ID". Each row in the table contains a pair of IDs, with "Edit" and "Delete" buttons next to each ID. The data in the table is as follows:

Hydrant ID	Inspection ID
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
10	12
11	11

Lists which hydrants are linked to which inspections.

## Create

	Edit	Delete	Hydrant ID	Inspection ID
1	<a href="#">Edit</a>	<a href="#">Delete</a>	1	5
3	<a href="#">Edit</a>	<a href="#">Delete</a>	3	3
4	<a href="#">Edit</a>	<a href="#">Delete</a>	4	4
5	<a href="#">Edit</a>	<a href="#">Delete</a>	5	5
6	<a href="#">Edit</a>	<a href="#">Delete</a>	6	6
7	<a href="#">Edit</a>	<a href="#">Delete</a>	7	7
8	<a href="#">Edit</a>	<a href="#">Delete</a>	8	8
9	<a href="#">Edit</a>	<a href="#">Delete</a>	9	9
10	<a href="#">Edit</a>	<a href="#">Delete</a>	10	10
10	<a href="#">Edit</a>	<a href="#">Delete</a>	10	12
11	<a href="#">Edit</a>	<a href="#">Delete</a>	11	11
12	<a href="#">Edit</a>	<a href="#">Delete</a>	12	12

7	<a href="#">Edit</a>	<a href="#">Delete</a>
8	<a href="#">Edit</a>	<a href="#">Delete</a>
9	<a href="#">Edit</a>	<a href="#">Delete</a>
10	<a href="#">Edit</a>	<a href="#">Delete</a>
10	<a href="#">Edit</a>	<a href="#">Delete</a>
11	<a href="#">Edit</a>	<a href="#">Delete</a>
12	<a href="#">Edit</a>	<a href="#">Delete</a>
13	<a href="#">Edit</a>	<a href="#">Delete</a>
15	<a href="#">Edit</a>	<a href="#">Delete</a>
16	<a href="#">Edit</a>	<a href="#">Delete</a>
17	<a href="#">Edit</a>	<a href="#">Delete</a>
18	<a href="#">Edit</a>	<a href="#">Delete</a>
19	<a href="#">Edit</a>	<a href="#">Delete</a>
40	<a href="#">Edit</a>	<a href="#">Delete</a>

Form to relate a hydrant to an inspection.

## Update

The screenshot shows a web application titled "Hydrant Inspections". On the left, there is a list of inspection records with columns for "Edit" and "Delete" buttons and numerical values (12, 13, 15, 16, 17, 18, 19, 40). On the right, a modal dialog box titled "Edit Hydrant Inspection" is displayed. It contains two dropdown menus: "Hydrant ID" set to 38 and "Inspection ID" set to "Inspection 18 on 2025-01-18". At the bottom of the dialog are "Save Changes" and "Cancel" buttons.

The screenshot shows the same "Hydrant Inspections" application after changes were made. The list now includes the following rows:

Edit	Delete	7
Edit	Delete	8
Edit	Delete	9
Edit	Delete	10
Edit	Delete	10
Edit	Delete	11
Edit	Delete	12
Edit	Delete	13
Edit	Delete	15
Edit	Delete	16
Edit	Delete	17
Edit	Delete	18
Edit	Delete	19
Edit	Delete	38

Reassigns or modifies a hydrant's inspection record. (Demonstrates M:N update.)

## Delete

The image consists of two vertically stacked screenshots of a web application titled "Hydrant Inspections".

**Screenshot 1:** This screenshot shows a confirmation dialog box in the center. The dialog box has a black background with white text and buttons. It reads: "classwork.engr.oregonstate.edu:9119 says Are you sure you want to delete this inspection?". Below the message are two buttons: "Cancel" on the left and "OK" on the right. The background of the main application shows a table of inspection data. The table has columns for "Edit" (blue button), "Delete" (red button), and inspection numbers (7, 8, 9, 10, 12, 11, 12, 13, 15, 16, 17, 18, 19, 38). The row for inspection number 38 is highlighted with a grey background.

**Screenshot 2:** This screenshot shows the same application after the deletion. The table now lists inspection numbers 6 through 19. The row for inspection number 38 is missing from the list.

Removes the link between a hydrant and an inspection. (Demonstrates M:N delete.)