

# Technical Curriculum Samples

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## Section 1 – Packet Overview

This packet includes curated excerpts from technical training programs I owned end-to-end for software and systems audiences. The samples highlight how I translate complex workflows into scalable learning experiences through instructor-led delivery, guided labs, and scenario-based practice. Each section provides brief context, representative evidence, and a summary of my responsibilities and approach.

## Section 2 – Advanced Email Security & Threat Analysis Training for Technical Support Engineers (Proofpoint)

### 2.1 Strategic Context

This curriculum supported Technical Support Engineers who troubleshoot enterprise email security issues for administrator audiences within a SaaS environment. The program blended instructor-led instruction with guided SQL labs to build durable technical fluency, not just familiarity, so engineers could investigate issues, interpret outputs, and make evidence-based decisions during live case work. The learning path intentionally moved from foundational database reasoning to applied investigation workflows that mirrored real support scenarios.

### 2.2 Evidence Map (What you're about to see)

The following pages provide a focused set of evidence illustrating the progression from concept → practice → platform-level application:

- **PP\_00 — Learning Objectives:** measurable outcomes aligned to technical investigation tasks
- **PP\_01 — Foundational Database Reasoning:** relational structure, relationships, and query intent
- **PP\_02 — Guided Query Practice:** stepwise SQL examples with outputs to build fluency
- **PP\_03 — Scenario Lab Activity (Murder Mystery):** scenario-based practice requiring iterative query refinement
- **PP\_04 — Platform-Level Application:** applying database/query skills to troubleshoot and analyze support cases

## PP\_00 Learning Objectives

You will...



- Describe a “relational database” in your own words
- Recall the relational database management system in use by the PPS software
- Repeat steps for logging in to a Proofpoint database
- List at least two ‘clauses’ from each of three categories, and their uses
- Solve a murder in SQL city
- Apply learned queries to Proofpoint databases

### **Explanation:**

These objectives were written to keep the course outcome-focused, not topic-focused. They move from understanding how relational data is organized, to writing queries, to using that skill in an investigation-style scenario and a platform context. That sequencing made it clear what “good” looked like at each stage of the training.

### **What problem it solves:**

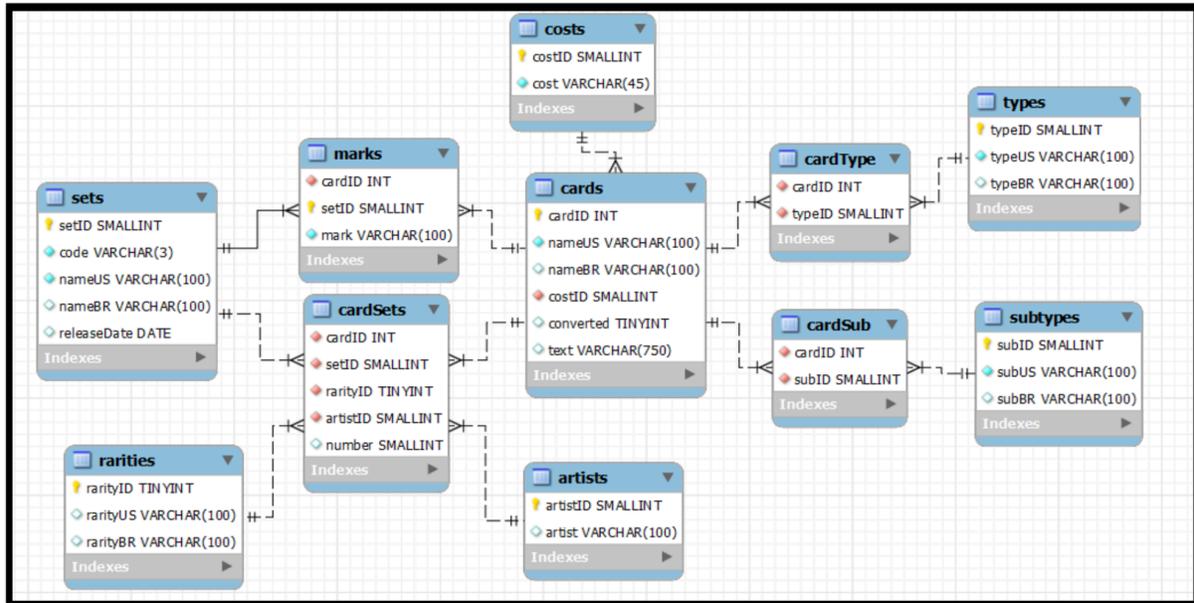
Prevents fragmented technical learning by aligning instruction to clear investigative outcomes rather than isolated syntax exposure.

### **What skill it builds:**

Structured technical reasoning and the ability to transfer foundational knowledge into real troubleshooting tasks.

## PP\_01 Foundational Database Reasoning

### What is a Relational Database?



#### Explanation:

This segment established the mental model engineers needed to reason about how data is structured and related across tables. By grounding learners in relationships and query intent first, the course reduced trial-and-error behavior and set up smoother transfer into hands-on querying and investigation.

#### What problem it solves:

Inconsistent troubleshooting caused by shallow database understanding and “guess-and-check” querying.

#### What skill it builds:

Architectural reasoning: interpreting how system data connects before executing investigative queries.

## PP\_02 Guided Query Practice

### SQL Queries

- SQL is a language all its own, with rules

```
1 SELECT * FROM groups WHERE EmailAddr = 'me@example.com'
```

- Like an English sentence with different 'blocks' (clauses).
- For example, in Proofpoint:

```
MariaDB [users]> SELECT * FROM safeblocklist LIMIT 3;
```

record_id	users_record_id	groups_record_id	emailaddr	entry_type
1	275	0	hadfields@gmail.com	1
3	257	0	purge@feedbackeu-maritzcx.com	1
4	257	0	delivers@amazon.com	1

```
3 rows in set (0.00 sec)
```

- But this is just pulling all data from one table and isn't very useful. Let's activity + walkthrough to learn more.

#### Explanation:

This guided practice segment models structured query refinement before learners enter the scenario lab. Queries are introduced incrementally—beginning with simple SELECT statements and expanding to conditional filtering and joins—while reinforcing interpretation of returned datasets. This scaffolding reduces cognitive overload and prepares engineers to apply SQL logic under investigative conditions.

#### What problem it solves:

Engineers copying queries without understanding how to modify them under real conditions.

#### What skill it builds:

Iterative query refinement and evidence-based interpretation of results.

# PP\_03 Scenario Lab Activity (SQL Murder Mystery)



There's been a Murder in SQL City! The SQL Murder Mystery is designed to be both a self-directed lesson to learn SQL concepts and commands and a fun game for experienced SQL users to solve an intriguing crime.

## Walkthrough for SQL Beginners

If you're comfortable with SQL, you can skip these explanations and put your skills to the test! Below we introduce some basic SQL concepts, and just enough detail to solve the murder. If you'd like a more complete introduction to SQL, try Select Star SQL.

A crime has taken place and the detective needs your help. The detective gave you the crime scene report, but you somehow lost it. You vaguely remember that the crime was a **murder** that occurred sometime on **Jan. 15, 2018** and that it took place in **SQL City**. Start by retrieving the corresponding crime scene report from the police department's database.

All the clues to this mystery are buried in a huge database, and you need to use SQL to navigate through this vast network of information. Your first step to solving the mystery is to retrieve the corresponding crime scene report from the police department's database. Below we'll explain from a high level the commands you need to know; whenever you are ready, you can start adapting the examples to create your own SQL commands in search of clues -- you can run any SQL in any of the code boxes, no matter what was in the box when you started.

## Some Definitions

### What is SQL?

SQL, which stands for Structured Query Language, is a way to interact with relational databases and tables in a way that allows us humans to glean specific, meaningful information.

### Wait, what is a relational database?

There's no single definition for the word *database*. In general, databases are systems for managing information. Databases can have varying amounts of structure imposed on the data. When the data is more structured, it can help people and computers work with the data more efficiently.

RUN ↴ SHOW SOLUTION RESET

Correct

name	transcript
Morty Schapiro	I heard a gunshot and then saw a man run out. He had a "Get Fit Now Gym" bag. The membership number on the bag started with "482". Only gold members have those bags. The man got into a car with a plate that included "H42W".
Annabel Miller	I saw the murder happen, and I recognized the killer from my gym when I was working out last week on January the 9th.

## Go Get 'em!

Now you know enough SQL to solve the mystery. You'll need to read the ERD and make some reasonable assumptions, but there's no other syntax that you need!

### Find the murderer!

It will take more than one query to find the killer, but you can just keep editing this box, keeping notes on your results along the way. When you think you know the answer, go to the next section.

```
SELECT facebook_event_checkin.person_id, facebook_event_che
FROM facebook_event_checkin
JOIN person
ON person.id = facebook_event_checkin.person_id
JOIN drivers_license
ON person.license_id = drivers_license.id
JOIN income
ON person.ssn = income.ssn
WHERE date LIKE '201712%'
```

```
10 AND event_name LIKE 'SQL%'
11 AND gender = 'female'
12 AND hair_color = 'red'
13 AND height BETWEEN '65' AND '67'
14 AND annual_income > '100000'
15
16
17
```

RUN ↴ RESET

person_id	event_name	date	id	name	license_id	ssn	id
99716	SQL Symphony Concert	20171206	99716	Miranda Priestly	202298	987756388	202298
99716	SQL Symphony Concert	20171212	99716	Miranda Priestly	202298	987756388	202298
99716	SQL Symphony Concert	20171229	99716	Miranda Priestly	202298	987756388	202298

## Explanation:

Scenario-based lab requiring learners to iteratively refine multi-table SQL queries using conditional filtering and pattern matching. Engineers form investigative hypotheses, test constraints, interpret results, and adjust logic; mirroring real-world troubleshooting workflows in enterprise support environments.

## What problem it solves:

Prevents shallow syntax memorization, requiring analytical narrowing and evidence validation.

## What skill it builds:

Structured investigative reasoning and iterative query refinement under realistic constraints.

## PP\_04 Proofpoint Context / Platform Transfer

### Inner Joins aliased with AS

- Resulting columns can also be 'aliased' using "AS" to avoid confusion

```
MariaDB [users]> SELECT userlist.EmailAddr as user, safeblocklist.users_record_id, safeblocklist.emailaddr as 'safe/blocked email', safeblocklist.entry_type as 'safe=1/blocked=2' FROM userlist JOIN safeblocklist ON userlist.record_id = safeblocklist.users_record_id LIMIT 20;
```

user	users_record_id	safe/blocked email	safe=1/blocked=2
Brian.Hadfield@maritzcx.com	275	hadfields@gmail.com	1
Bradley.Gerkens@maritzcx.com	257	purge@feedbacku-maritzcx.com	1
Bradley.Gerkens@maritzcx.com	257	delivers@amazon.com	1
Bryan.Fernandez@maritzcx.com	289	thegymgroup@et.thegymgroup.com	1
Bryan.Fernandez@maritzcx.com	289	ihgrewardsclub@sm.ihg.com	1
christine.johnston-peters@maritzcx.com	421	autonews@e.crainliveevents.com	1
christine.johnston-peters@maritzcx.com	421	thebrick@save.thebrick.com	1
christine.johnston-peters@maritzcx.com	421	founder@wxnetwork.com	1
christine.johnston-peters@maritzcx.com	421	staples@easy.staples.ca	1
Jacob.corkins@maritzcx.com	989	contact@email.cbssports.com	1
Vicki.Liska@maritzcx.com	2282	contact@email.cbssports.com	1
Kim.Gruhler@maritzcx.com	1222	feedback@allegiancetechnology.com	1
vanessa.gerdum@maritzcx.com	2259	newsletter_d@doccheck.com	1
Mike.Sinoway@maritzcx.com	1510	deltaairlines@e.delta.com	1
Kim.Gruhler@maritzcx.com	1222	bedbath&beyond@emailbedbathandbeyond.com	1
Kim.Gruhler@maritzcx.com	1222	notifications@owlerinc.com	1
vanessa.gerdum@maritzcx.com	2259	outcollaborate@team.wrike.com	1
Jenni.Ellis@maritzcx.com	1051	notifications@owler.com	2
Mallory.Corkins@maritzcx.com	1352	contact@email.cbssports.com	1
Jeff.Newsted@maritzcx.com	1038	notifications@owler.com	1

20 rows in set (0.00 sec)

#### Explanation:

This portion connects database/query skills directly to product-context troubleshooting and case analysis. Learners practice using SQL to locate relevant records, correlate identifiers, and support accurate support decisions in the platform environment.

#### What problem it solves:

The gap between knowing SQL and applying it effectively within SaaS product support scenarios.

#### What skill it builds:

Platform-aligned troubleshooting fluency and reliable investigative decision-making.

## 2.3 My Responsibilities

The program supported technical teams responsible for troubleshooting issues for enterprise administrator customers, so content was designed for real-world decision-making and speed to proficiency.

- Owned the training end-to-end, serving as both designer and facilitator; built the curriculum and delivered it live, then iterated based on what did or didn't stick with learners
- Rebuilt the program from a lecture-heavy format into a scaffolded, practice-led learning path (concept → guided query practice → scenario lab → product transfer)
- Strengthened technical accuracy through targeted self-upskilling and validation of database and SQL concepts for an engineer audience
- Designed the core hands-on component: a scenario-based SQL investigation lab ("SQL Murder Mystery") requiring hypothesis formation, query refinement, and result interpretation
- Produced a complete delivery kit (slides, instructor notes, guided lab materials) to ensure repeatable delivery and consistent learner experience
- Facilitated group practice and independent practice with checkpoints focused on reasoning and output interpretation, not rote syntax
- Aligned exercises to real support investigation behaviors and iterated content based on learner feedback and observed performance trends
- Measured effectiveness through observed troubleshooting performance and qualitative feedback, adjusting pacing and lab complexity to improve time-to-proficiency.

## Section 3 – Ecopac Automation & Equipment Operations Training (Amazon)

### 3.1 Strategic Context

This training supported operational readiness for automated packaging equipment (Ecopac) in a high-throughput fulfillment environment. The goal was to ensure associates could execute critical equipment workflows accurately and consistently prior to live deployment.

The course design emphasized procedural sequencing, system awareness, and applied practice to reduce error rates during production ramp.

## 3.2 Evidence Map

The following pages demonstrate progression from structured orientation to applied workflow simulation:

- **EP\_00 — Course Architecture:** sequenced learning path aligned to operational workflow
- **EP\_01 — Procedural Reinforcement:** drag-and-drop step validation for task sequencing
- **EP\_02 — Interactive Practice / Simulation:** applied task performance and decision reinforcement

### EP\_00 — Course Architecture (Storyline Menu)

#### **[NEW PACK MACHINE] Operator Training**

##### **Welcome to [New Pack Machine] Operator Training!**

After taking this training, you will be able to work at the [New Pack Machine] safely and fix basic exceptions.

*Do not attempt to perform any task(s) outside of this training.*

Agenda:



Overview,  
Safety &  
Map of the  
Machine



Starting,  
Resetting, and  
Stopping



Induct &  
Operation



Faults &  
Exceptions

#### **Explanation**

The course was structured to mirror the real operational lifecycle of the machine—moving from safety and orientation into startup, induct operation, and exception handling. Sections were intentionally sequenced to require completion in order while still allowing revisits once mastery was demonstrated.

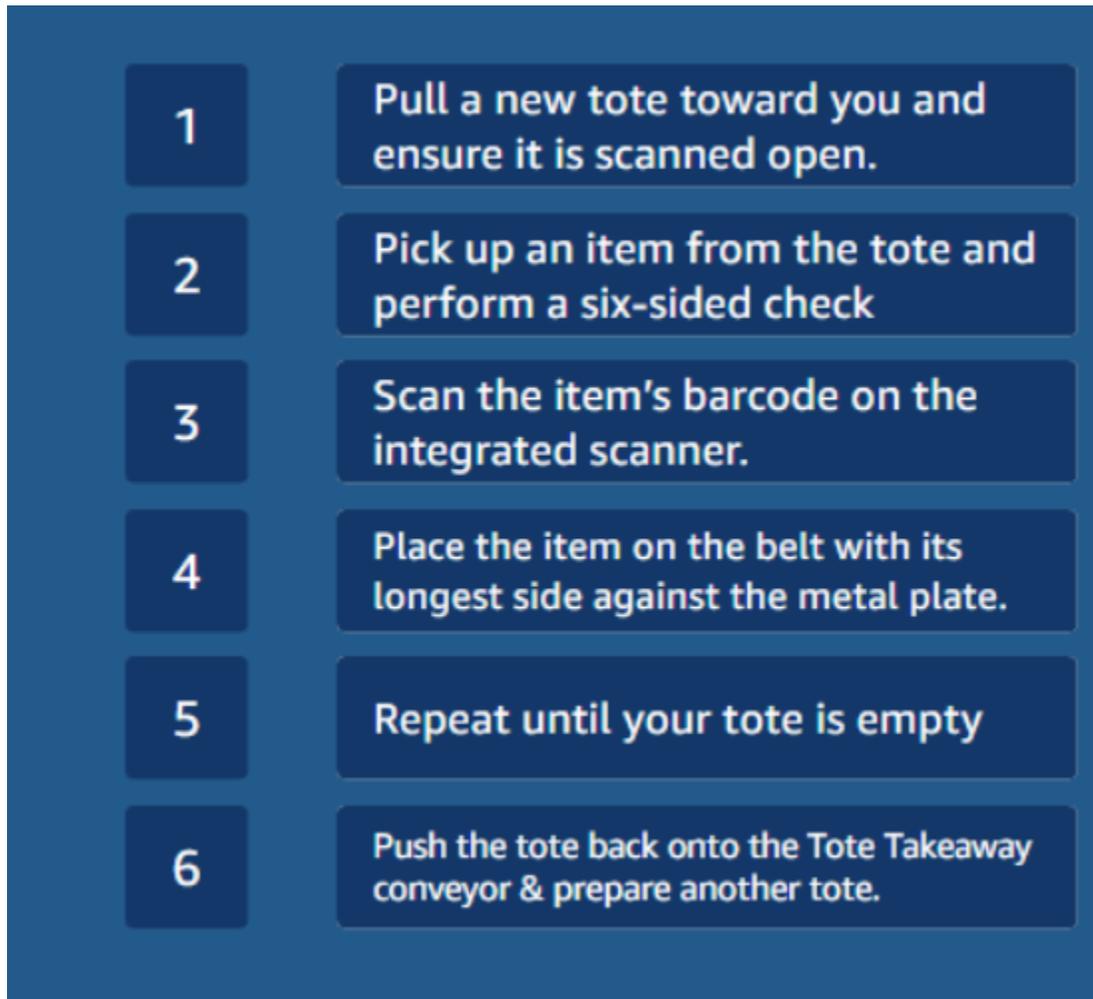
#### **Why it matters**

Automation training must reflect real production flow; misaligned sequencing increases operational and safety risk.

#### **What it reinforces**

System-level awareness and staged competency before hands-on execution.

## EP\_01 — Procedural Sequencing Validation (Drag-and-Drop)



### **Explanation**

This interaction required learners to correctly sequence each step of the induction workflow before progressing. Rather than asking for recognition-based answers, the activity validated full task order understanding aligned to live equipment behavior.

### **Why it matters**

Incorrect task order in automated systems can cause jams, mis-scans, or downstream process disruption.

### **What it reinforces**

Procedural accuracy and retention of critical operational sequence.

## EP\_02 — Applied Induction Simulation

### [NEW PACK MACHINE] Operator Training

#### Let's practice! – Simulation 1



Correct! The second step is to pick up the item from the tote and perform a six-sided check. Time to induct!

**Drag the item to scan it and place it on the belt. Remember to always verify that your screen is green to indicate a successful scan!**

#### Explanation

The simulation required learners to perform the full induction process in sequence—selecting an item, scanning it correctly, and placing it on the belt. Advancement depended on correct execution, reinforcing the relationship between operator action and system response (e.g., screen turning green upon successful scan).

This approach reduced reliance on shadowing alone by providing structured rehearsal prior to production exposure. (Interaction demo available upon request)

#### Why it matters

Passive instruction does not prepare associates for equipment interaction in high-volume environments.

#### What it reinforces

Applied task execution, decision accuracy, and consequence awareness prior to live deployment.

### 3.3 My Responsibilities

- Owned curriculum design and maintenance for automation equipment training aligned to real production workflows and deployment timelines
- Translated complex equipment behavior and system logic into structured, role-specific learning experiences for frontline operators and leaders
- Designed applied practice elements, including ordered-step validation and interactive workflow simulations, to reinforce execution accuracy prior to live deployment
- Architected a staged learning progression (orientation → procedural reasoning → simulated execution → exception handling) to reduce operational risk
- Partnered with operations, engineering, and launch stakeholders to validate technical accuracy and reflect equipment updates
- Supported site rollout readiness by aligning training deliverables to ramp milestones and production requirements
- Developed scalable Storyline-based assets enabling both instructor-supported and self-paced delivery models

## Section 4 — Design Approach

### 4.1 Approach Overview

My approach starts with the work learners must perform on the job — troubleshooting, investigation, or procedural execution — then designs backward to the smallest set of concepts and practice needed for reliable performance. I focus on transfer: learners should be able to apply skills under real conditions, not simply recall steps in a training environment.

To support that transfer, I structure learning in deliberate stages: establish a clear mental model, model the reasoning and workflow, provide guided practice with feedback, and then require applied execution through labs or simulations. Assessments are designed to validate decision-making and task performance (e.g., query refinement, step sequencing, scenario responses), rather than rewarding recognition or memorization.

Finally, I treat training as a living system. I partner with stakeholders to validate technical accuracy, align content to operational realities, and iterate based on learner performance patterns and feedback so curriculum stays current, scalable, and tied to measurable outcomes.

Across environments, whether enterprise SaaS support, automation operations, or anything in between, the constant is designing for reliable performance, accelerated proficiency, and measurable risk reduction.