

Episode 1: The Missing Balance Patch (Interactive Version)

Data Detective Academy - Case #001

■ Case Overview

Case Title: The Missing Balance Patch

Case Number: #001

Difficulty: Beginner

Key Learning: Sudden changes in data always have a cause. Check system logs and permission records to discover hidden manipulations.

Synopsis:

A specific character's win rate has abnormally surged in a popular online game. The Shadow character's win rate jumped from 50% to 85% overnight, but no official patches were released. Analyze win rate graphs, patch logs, and server records to uncover the insider's manipulation!

■ Characters

Main Characters

Kastor

- Role: Senior Detective, Your Mentor
- Personality: Laid-back but sharp. Likes to test rookies with tough questions.
- Quote: "Detectives work with data, not feelings~"

Detective (Player)

- Role: New Detective, First Day
- Your role: Analyze data, interview suspects, solve the case

Client

Maya Chen

- Role: Senior Game Designer, Balance Patch Lead
- Company: Game Studio
- Situation: Desperate for help as player trust is collapsing
- Quote: "If we lose player trust... the game could die!"

Suspects & Witnesses

Ryan Nakamura ■■

- Role: Balance Designer
- Account: admin01
- Personality: Passionate about game balance, competitive player
- Background: Participates in company tournaments
- Suspicion Level: ★★★★★

Daniel Schmidt

- Role: Senior Admin, Ryan's Mentor
- Account: admin02
- Personality: Trusting and supportive
- Background: Mentored Ryan for one year
- Suspicion Level: ★■■■■■

Alex Torres (ShadowFan99)

- Role: Shadow Main Player
- IGN: ShadowFan99
- Personality: Enthusiastic gamer
- Background: Played on Day 28 from 7-9 PM
- Suspicion Level: ★■■■■■

■ Scene 0: First Meeting

[Setting: Run-down office. Papers scattered everywhere.]

Kastor: (sleeping) "Zzz..."

[Detective opens door and enters]

Detective: "Is this the right place?"

Kastor: "Huh?" (waking up) "Oh, the newbie?"

Detective: "I'm the new detective."

Kastor: "You don't look like a detective."

Detective: "It's my first day!"

Kastor: "Yeah, I can tell. What's your name?"

[PLAYER INPUT: Name Entry]

Kastor: "Got it. I'm Kastor."

Kastor: "Alright, we've got our first case. Ready to dive in?"

■ Scene 1: Client Email & Maya's Call

Email Arrives

Kastor: "Mail's here!"

[Opens email]

From: Maya Chen

Subject: URGENT! Please help!

The Shadow character's win rate jumped from 50% to 85% overnight!

We didn't release any patches... This is a disaster!

■ EVIDENCE ADDED: Maya's Request Email

Question Time

Q: What's your initial assessment?

A) "So it suddenly became overpowered" ✓ (10 points)

B) "It's probably just a bug" (5 points)

Maya's Phone Call

[Phone rings]

Maya: "Hello! Is this the detective?"

Detective: "Yes, I received your email."

Maya: "This is a complete disaster! Players are rioting, the community is exploding with complaints..."

Maya: "If we lose player trust... the game could die!"

Detective: "Calm down. Tell me exactly what happened."

Maya: "We have a character called Shadow, and starting on Day 28, it suddenly became way too strong."

Maya: "But we didn't release any official patches!"

Kastor: "Interesting. Can you send us the data?"

Maya: "Yes! I'll send it right now!"

■ EVIDENCE ADDED: Maya's Testimony - "No Official Patch"

■ EVIDENCE ADDED: Character Performance Data

Detective's Deduction

Q: What could be causing this?

A) "Three possibilities: Hidden patch, bug, or someone tampered with it" ✓ (15 points)

B) "Definitely a hidden patch" (5 points)

Kastor: "Three possibilities. Hidden patch, bug, or..."

Kastor: "Someone tampered with it."

Detective: "I'm guessing the last one."

Kastor: "Just a hunch? Detectives work with data, not feelings~"

■ Scene 2: Graph Analysis (INTERACTIVE)

Kastor: "Alright, data's in! Time for you to analyze it."

Kastor: "Shadow, Phoenix, Viper. What looks suspicious?"

■ Interactive Graph Analysis

[PLAYER ACTION: Analyze the win rate graph]

Win Rate Data:

Day 24-27: Shadow 49.5-50.2% (Normal)

Day 28: Shadow 84.7% (ABNORMAL!)

Day 29-30: Shadow 85.1-85.3% (Sustained)

Phoenix: Gradual increase from 52.3% to 56.1%

Viper: Gradual decrease from 48.2% to 46.8%

Question: Which character shows an abnormal pattern?

[PLAYER SELECTS: Shadow (Red line)] ✓

Analysis Results

Detective: "The red line starting from Day 28..."

Kastor: "Like a rollercoaster, right?"

Detective: "It shot straight up!"

[INTERACTIVE: Zoom in on Day 28 spike]

■ Detailed Analysis:

Day 27: Win Rate 50.2% (Normal)

Day 28: Win Rate 84.7% (ABNORMAL!)

Day 29: Win Rate 85.1% (Sustained)

■ **EVIDENCE ADDED: Shadow Win Rate Spike Graph**

Kastor: "Exactly! Something's definitely fishy."

Detective: "Phoenix went up a bit too though?"

Kastor: "That's a healthy increase. Shadow's is a rocket launch."

■ **LOGIC THOUGHT UNLOCKED: "Shadow's Unnatural Power Spike"**

Kastor: "Not bad for a rookie. Took you 10 minutes."

■ Scene 3: Document Investigation (INTERACTIVE)

Kastor: "Let's check the official patch notes."

■ Interactive Document Examination

[PLAYER ACTION: Click on suspicious sections]

[illegible]

■ DAY 28 PATCH NOTES ■

[illegible]

■ Phoenix: Cooldown -2 seconds ✓ ■

■ Viper: Bug fix (hitbox) ✓ ■

■ Shadow: No changes listed ■■ ■

[illegible]

Detective: "It says Shadow wasn't changed."

■ EVIDENCE ADDED: Official Patch Notes - Day 28

Kastor: "But the win rate went up. Suspicious. Let's check the server logs!"

■ Server Log Search

Kastor: "Search for 'Shadow' in the logs around Day 28."

[PLAYER ACTION: Filter logs by keyword and date]

■ SERVER LOGS - DAY 28 ■

■ [Day 28 19:20] admin01 - Shadow data accessed (READ) ■

■ [Day 28 23:47] admin01 - Shadow data modified (WRITE) ■■ ■

■ [Day 28 23:52] admin01 - Log deletion attempt (FAILED) ■ ■

Detective: "Wait, someone modified it!"

Kastor: "And at 11 PM. Plus they tried to delete the logs."

■ EVIDENCE ADDED: Server Log - Unauthorized Modification

■ LOGIC THOUGHT UNLOCKED: "Someone Tampered After Hours"

■ Scene 3.5: Logic Connection (INTERACTIVE)

Kastor: "Time to connect the dots. What do these clues tell us?"

■ Interactive Logic Matrix

[PLAYER ACTION: Connect two logic thoughts]

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[CORRECT CONNECTION: 1 + 2 = New Deduction] ✓

Detective: "The official patch notes say Shadow wasn't changed..."

Detective: "But the win rate proves it WAS changed!"

■ NEW LOGIC UNLOCKED: "Unauthorized Patch Occurred"

Detective: "Someone modified Shadow's data secretly after work hours!"

Kastor: "Bingo! Now we need to find out WHO."

Detective: "Maya should know who admin01 is!"

Calling Maya

[Phone call]

Detective: "Maya, I checked the official documentation."

Maya: "Yes, we didn't touch Shadow."

Detective: "But the server logs show modification records by admin01."

Maya: "...What? Then someone secretly...?"

Maya: "admin01... Hold on, let me check."

Maya: "admin01 is Ryan Nakamura. He's our balance designer..."

■ **PROFILE ADDED: Ryan Nakamura - Balance Designer**

Detective: "Did he work late that night?"

Maya: "No! Day 28 was a no-overtime day!"

Maya: "From home... did he log in secretly?"

■ **EVIDENCE UPDATED: Maya's Testimony - "Ryan Shouldn't Have Been Working"**

Kastor: "Highly likely. We need to dig deeper."

■ Scene 4: Timeline Reconstruction (INTERACTIVE)

Kastor: "Let's filter admin01's activity logs!"

Kastor: "Arrange these events in chronological order."

■ Interactive Timeline Builder

[PLAYER ACTION: Drag and drop events to correct positions]

Scrambled Events:

- Shadow data modified
- Home login detected
- Shadow data accessed
- Office logout
- Office login
- Log deletion attempt

[CORRECT ORDER:]



■ EVIDENCE ADDED: Ryan's Activity Timeline

Detective: "He logged back in from home after leaving work!"

Kastor: "This was planned. But wait..."

Kastor: "There's also admin02. Logged in at 10:30 PM."

Comparing Timelines

admin02 (Daniel):

22:30 - Login

22:35 - Server health check

22:40 - Logout

admin01 (Ryan):

23:35 - Login

23:47 - Shadow modified

Detective: "admin02 left before admin01 logged in."

Kastor: "Let's interview Daniel to confirm."

Daniel Interview

[Call connects]

Daniel: "Hello? You were looking for me?"

Detective: "Daniel Schmidt? I have a few questions."

Daniel: "Sure, of course!"

Q: What do you want to ask Daniel?

A) "What were you doing on Day 28 at 10:30 PM?" ✓

B) "Do you know Ryan well?" ✓

Daniel's Testimony

Detective: "You logged in on Day 28 at 10:30 PM, correct?"

Daniel: "Oh, yes! There was an emergency server check."

Detective: "What did you do?"

Daniel: "Just checked the server status. About 10 minutes?"

■ TESTIMONY ADDED: Daniel's Statement

Detective: "Do you know what Ryan was doing that night?"

Daniel: "Ryan? He probably went home."

Daniel: "We left together. Around 7 PM?"

Kastor: "But Ryan logged back in at 11:35 PM."

Daniel: "...What? From home?"

Daniel: "That can't be right... Ryan's a good kid!"

Detective: "Are you sure?"

Daniel: "Yes! I've been his mentor for a year. He's hardworking and kind!"

■ **PROFILE ADDED: Daniel Schmidt - Senior Admin, Ryan's Mentor**

Kastor: "Understood. Thanks for your help."

[Call ends]

Detective: "Daniel seems to know nothing."

Kastor: "Yeah. Ryan acted alone."

■ Scene 5: IP Investigation & Database Search (INTERACTIVE)

Kastor: "admin01's IP trace is back!"

Detective: "192.168.45.178?"

Kastor: "This IP also played the game. Let's search it."

■ Interactive Database Search

[PLAYER ACTION: Search player database by IP]

[illegible]

[SEARCH RESULTS:]

SEARCH RESULTS

IGN: Noctis [SUSPICIOUS]

IP: 192.168.45.178 ✓

Main Character: Shadow (95% pick rate)

Day 28 Session: 23:50~01:30

Win Rate: 48% → 88%

Started playing 3 minutes after modification!

■ EVIDENCE ADDED: Noctis Player Profile

Detective: "Started playing 3 minutes after the modification!"

Kastor: "Suspicious timing. But there's another Shadow player."

Additional Player Found:

IGN: ShadowFan99

Main Character: Shadow (87% pick rate)

Day 28 Session: 19:00~21:00

Win Rate: 62% → 65%

Detective: "ShadowFan99 also benefited."

Kastor: "Let's interview both. You choose who to call first."

Q: Who should we interview first?

A) "Interview ShadowFan99 (Alex) first" ✓ (10 points)

B) "Interview Noctis (Ryan) first" (5 points)

■ Scene 5A: Alex Interview (INTERACTIVE)

[Call - Alex]

Alex: "Hello? What's this about?"

Detective: "Alex Torres? I have some questions about the game."

Alex: "Sure! I'm a Shadow main!"

■ Interactive Testimony Analysis

■ ALEX'S TESTIMONY ■

[illegible]

- 1. "I played Shadow on Day 28 from 7 PM to 9 PM!" ■
- 2. "Shadow got so strong that day, it was awesome!" ■
- 3. "I stopped at 9 PM and did homework after that." ■
- 4. "I didn't log in again that night!" ■

Q: Which statement do you want to press?

- A) Press: "Shadow got so strong that day" ✓
B) Press: "I didn't log in again that night" ✓

Pressing Statement 2

Detective: "You noticed Shadow became stronger?"

Alex: "Yeah! Suddenly I was winning way more matches!"

Alex: "I thought it was just me getting better, but..."

Detective: "But what?"

Alex: "Other Shadow players were dominating too!"

Pressing Statement 4

Detective: "Can you prove you didn't log in after 9 PM?"

Alex: "Check the logs! I have nothing to hide!"

[PLAYER ACTION: Check game logs]

■ GAME LOGS - ShadowFan99 ■

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■ 19:02 - Login ■

■ 20:58 - Logout ✓ ■

■ [No further activity] ■

■ EVIDENCE ADDED: Alex's Alibi - Logged out at 9 PM

Detective: "You're right. You logged out at 9 PM."

Alex: "See? It wasn't me! I just played the game!"

Detective: "Understood. Thank you."

[Call ends]

Kastor: "Alex is clear. Now for Ryan..."

■ Scene 5B: Ryan Confrontation (INTERACTIVE)

[Call - Ryan]

Detective: "Ryan Nakamura?"

Ryan: "Yes... what's going on?" (nervous voice)

■ Interactive Confrontation Sequence

Ryan's Testimony - "I Was Just Working Late":

■ RYAN'S TESTIMONY ■

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- 1. "I sometimes log in from home to check things." ■
- 2. "Day 28 was a normal work day for me." ■
- 3. "I left the office around 7 PM with Daniel." ■
- 4. "I didn't do anything unusual that night." ■
- 5. "I don't know why Shadow's win rate changed." ■

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[PLAYER ACTION: Find contradictions and present evidence]

Press Statement 1:

Detective: "You log in from home often?"

Ryan: "Y-yes... when there are urgent issues..."

Kastor: "But Day 28 had no reported issues."

Ryan: "I... I was just being proactive!"

Press Statement 3:

Detective: "You left with Daniel at 7 PM?"

Ryan: "Yes, Daniel can confirm this..."

[! CONTRADICTION DETECTED !]

[PRESENT Evidence: "Ryan's Home Login - 23:35"]

Detective: "But the logs show you logged in at 11:35 PM from home!"

Ryan: "...Who told you that?"

Kastor: "The server logs don't lie."

Ryan: "I, I was just... doing a routine check..."

[UPDATE TESTIMONY - New statement added]

Ryan: "I only did a routine server check from home."

[! CONTRADICTION DETECTED !]

[PRESENT Evidence: "Shadow Modified at 23:47"]

Detective: "At 11:47 PM, you modified Shadow's data."

Ryan: "....."

Press Statement 5:

Detective: "You said you don't know why Shadow changed."

[! CONTRADICTION DETECTED !]

[PRESENT Evidence: "Noctis Player Profile - IP Match"]

Detective: "And 3 minutes later, you logged into the game as Noctis from the same IP."

Ryan: "....."

Kastor: "We have all the evidence. The IP matches, the timing's perfect, and you modified the data."

[CASE BREAKTHROUGH!]

■ Scene 5C: Evidence Chain Assembly (INTERACTIVE)

Kastor: "Show him the complete evidence chain!"

■ Interactive Evidence Chain

[PLAYER ACTION: Arrange evidence in chronological order]

■ EVIDENCE CHAIN ASSEMBLY ■

[illegible]

11

■ Drag events into correct order: ■

"

■ [] Ryan logged in from home (23:35) ■

■ [] Ryan modified Shadow data (23:47) ■

■ [] Ryan logged into game as Noctis (23:50) ■

■ [] Noctis's win rate skyrocketed (48%→88%) ■

■ [] Ryan attempted to delete logs (23:52) ■

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[illegible]

[EVIDENCE CHAIN COMPLETE!] ✓

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■ COMPLETE EVIDENCE CHAIN ■

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■ 1. Ryan logged in from home (23:35) ■

■ 2. Ryan modified Shadow data (23:47) ■

■ 3. Ryan logged into game as Noctis (23:50) ■

■ 4. Noctis's win rate skyrocketed (48%→88%) ■

■ 5. Ryan attempted to delete logs (23:52) ■

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Detective: "The evidence proves you illegally modified Shadow to boost your own gameplay."

Ryan: "....."

Ryan: "...I'm sorry."

[CASE BREAKTHROUGH!]

■ Scene 6: Motive & Resolution

Detective: "Why did you do it?"

■ Interactive Motive Investigation

Ryan's Confession:

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■ RYAN'S CONFESSION ■

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■ "I wanted to win in the company tournaments." ■

■ "I love Shadow but my skill wasn't good enough." ■

■ "I thought a small buff wouldn't hurt anyone." ■

■ "I didn't think it would cause this much chaos." ■

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■ EVIDENCE ADDED: Ryan's Confession

Q: How do you respond to Ryan?

- A) "You betrayed your company's trust!" (10 points)
- B) "I understand, but it was still wrong." ✓ (15 points)
- C) "Everyone makes mistakes." (10 points)

Ryan: "I really am sorry. There's no excuse for what I did."

Kastor: "Alright, let's compile the final report."

■ Scene 6.5: Final Case Report Assembly (INTERACTIVE)

Kastor: "Put together the complete picture of what happened."

■ Interactive Case Summary

[PLAYER ACTION: Fill in the case report]

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■ CASE REPORT - CASE #001 ■

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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■ WHO: [Select suspect] ■

■ ■ Ryan Nakamura ✓ ■

■ ■ Daniel Schmidt ■

■ ■ Alex Torres ■

■ ■ Maya Chen ■

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■ WHEN: [Select time] ■

■ ■ Day 27, 19:20 ■ ■

■ ■ Day 28, 23:47 PM ✓ ■

■ ■ Day 28, 22:30 ■

■ ■ Day 29, 01:00 ■

10

■ HOW: [Select method] ■

■ ■ Unauthorized data modification ✓ ■

■ ■ Bug exploitation ■

■ ■ Official patch mistake ■

■ ■ Hacking attack ■

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■ WHY: [Select motive] ■

■ ■ Personal competitive advantage ✓ ■

■ ■ Testing game balance ■

■ ■ Sabotaging the company ■ ■

■ ■ Accidental mistake ■

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EVIDENCE:

■ ✓ Server logs showing modification ■

■ ✓ IP address match with Noctis ■

■ ✓ Timeline of events ■

■ ✓ Win rate data spike ■

■ ✓ Ryan's confession ■

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[CASE REPORT COMPLETE!] ✓

■ Scene 7: Character Reactions

Maya's Response

[Maya calls]

Maya: "It really... was Ryan?"

Detective: "Yes. He confessed."

Maya: "...I'm disappointed. But I understand the pressure he felt."

Maya: "Thank you so much for your help!"

[CLIENT SATISFACTION: ★★★★★]

Daniel's Response

[Daniel calls]

Daniel: "Ryan... really did it?"

Detective: "Yes. The evidence was clear."

Daniel: "I trusted him... but thank you for finding the truth."

Alex's Response

[Alex messages]

Alex: "You caught the culprit? Thank goodness! Thanks!"

■ Scene 8: Case Evaluation & Grading

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■ CASE EVALUATION SCREEN ■

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■ Outstanding Detective Work! ■

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■ Evidence Collected: 12/12 ✓ ■

■ Logic Connections Made: 5/5 ✓ ■

■ Contradictions Found: 3/3 ✓ ■

■ Interview Accuracy: 100% ✓ ■

■ Time Taken: Optimal ■

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■ FINAL GRADE: S RANK ■ ■

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Case Closed

Kastor: "First case solved perfectly! 100 points!"

Detective: "I feel accomplished!"

Kastor: "That's the detective high! Ready for the next case?"

Detective: "Already?!"

Kastor: "Detectives are busy~ Get used to it!"

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■ [CASE #001 COMPLETE] ■

■ ■

■ [NEXT CASE UNLOCKED] ■

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■ Interactive Mechanics Summary

Player Interactions

1. Scene 2: Graph Analysis

- Click on data points to reveal details
- Identify abnormal patterns
- Zoom functionality for detailed view

2. Scene 3: Document Examination

- Click on suspicious sections
- Filter server logs by keyword and date
- Interactive log search interface

3. Scene 3.5: Logic Connection

- Connect related thoughts
- Form deductions from evidence
- Unlock new logical conclusions

4. Scene 4: Timeline Reconstruction

- Drag-and-drop events
- Arrange in chronological order
- Identify suspicious timing patterns

5. Scene 5: Database Search

- Search by IP address
- Analyze player profiles
- Correlate timing with evidence

6. Scene 5A/5B: Testimony System

- Press statements for more details
- Present evidence to find contradictions
- Build case against suspect

7. Scene 6.5: Case Report Assembly

- Multiple choice selections
- WHO, WHEN, HOW, WHY format
- Evidence checklist verification

■ Ace Attorney Elements Integrated

Evidence System

- **Court Record:** All evidence stored in notebook
- **Evidence Collection:** Automatic during investigation
- **Evidence Presentation:** Present to expose lies

Investigation Mechanics

- **Press Testimony:** Dig deeper into statements
- **Present Evidence:** Contradict false claims
- **Logic Connections:** Connect clues to form conclusions

Interactive Puzzles

- **Graph Analysis:** Data-driven investigation
- **Timeline Reconstruction:** Sequence events correctly
- **Database Search:** Digital forensics
- **Case Report:** Final deduction assembly

Grading System

Performance-based scoring:

- **S Rank:** Perfect investigation (100%)
- **A Rank:** Excellent work (80-99%)
- **B Rank:** Good job (60-79%)
- **C Rank:** Case solved (below 60%)

■ Evidence Collected (12 Total)

1. ✓ Maya's Request Email
2. ✓ Maya's Testimony - "No Official Patch"
3. ✓ Character Performance Data
4. ✓ Shadow Win Rate Spike Graph
5. ✓ Official Patch Notes - Day 28
6. ✓ Server Log - Unauthorized Modification
7. ✓ Ryan's Profile
8. ✓ Maya's Testimony - "Ryan Shouldn't Have Been Working"
9. ✓ Ryan's Activity Timeline
10. ✓ Daniel's Profile & Statement
11. ✓ Noctis Player Profile
12. ✓ Alex's Alibi
13. ✓ Ryan's Confession

■ Key Learning Points

1. Data Analysis

- Sudden spikes indicate external intervention
- Compare normal patterns with anomalies
- Visual data reveals hidden truths

2. Log Tracking

- Server logs are reliable evidence
- Timestamps reveal suspicious activity
- Failed deletion attempts leave traces

3. Change Detection

- Official records vs actual changes
- Discrepancies point to manipulation
- Multiple data sources provide verification

4. Investigation Process

- Gather data → Analyze patterns → Form hypothesis
- Interview witnesses → Collect evidence → Confront suspect
- Build logical chain → Present proof → Solve case

5. Digital Forensics

- IP tracking connects accounts
- Activity timelines reveal planning
- Database records preserve truth

■ Takeaway

"Sudden changes in data always have a cause. Check system logs and permission records to discover hidden manipulations."

Case Solved!

END OF EPISODE 1

Thank you for playing Data Detective Academy!

■ Technical Implementation Notes

Story Structure

- **50+ story nodes** with branching paths
- **Multiple choice questions** with point rewards
- **Evidence notifications** throughout investigation
- **Logic thought unlocks** for deduction progression

Interactive Components

- GraphAnalysisInteractive.tsx
- DocumentExamination.tsx
- LogicConnectionPuzzle.tsx
- TimelineReconstruction.tsx
- DatabaseSearch.tsx (NEW)
- TestimonyPress.tsx
- CaseReportAssembly.tsx (NEW)

Character Profiles

- Ryan Nakamura (Culprit)
- Daniel Schmidt (Witness)
- Alex Torres (Innocent)
- Maya Chen (Client)

Evidence Types

- DOCUMENT: Emails, patch notes, logs
- DATA: Charts, tables, databases
- DIALOGUE: Testimonies, interviews
- CHARACTER: Profile cards

Document Version: 1.0

Last Updated: 2025-11-10