

C400 Course

Performance Issue Report Analysis

Student Name: _____
Student ID: _____
Time to Complete (minutes): _____

Assigned Project: Apache Avro

Assigned Issue Tickets:

AVRO-1282, AVRO-1332, AVRO-1089, AVRO-1090, AVRO-1348

Instructions: Apache Avro is a remote procedure call and data serialization framework developed within the Apache Hadoop project. It uses JSON for defining data types and protocols, and serializes data in a compact binary format. Your task is to analyze five performance-related issue tickets from this project to understand how performance problems are identified, discussed, and resolved in a real-world setting. You have been assigned five specific issue tickets to analyze. For each ticket, please complete the analysis form on the following pages. Your goal is to act as a software quality analyst, using the provided evidence within the ticket to understand the return on investment (ROI) and other factors involved in fixing a real-world performance bug.

Issue Ticket Analysis: AVRO-1282

1. **Performance Problem Summary** *In 1-3 sentences, what is the core performance problem described in this issue ticket?*

2. **Profiling Data** *Quote the exact sentence(s) from the ticket's description or comments that contain performance-related data or observations.*

3. **Return (R)** *How much time (or %) was the performance improved? Extract or calculate this from the profiling data.*

4. **Investment (I)** *How many unique developers participated, and what is the total number of comments?*

- Unique Developers: _____
- Total Comments: _____

5. **Analysis of Other Quality Attributes** *Were other quality attributes (e.g., maintainability, readability) mentioned? If so, provide the quote as evidence.*

- Attribute(s) Mentioned: _____
- Evidence (Quote):

6. **ROI Assessment** *Based on your findings for Return (R) and Investment (I), would you classify the ROI for fixing this issue as high or low? Briefly explain why.*

7. **Task Feedback** *What was the biggest challenge you faced while analyzing this ticket? (e.g., difficulty finding data, unclear discussions, etc.)*

Issue Ticket Analysis: AVRO-1332

1. **Performance Problem Summary** *In 1-3 sentences, what is the core performance problem described in this issue ticket?*

2. **Profiling Data** *Quote the exact sentence(s) from the ticket's description or comments that contain performance-related data or observations.*

3. **Return (R)** *How much time (or %) was the performance improved? Extract or calculate this from the profiling data.*

4. **Investment (I)** *How many unique developers participated, and what is the total number of comments?*

- Unique Developers: _____
- Total Comments: _____

5. **Analysis of Other Quality Attributes** *Were other quality attributes (e.g., maintainability, readability) mentioned? If so, provide the quote as evidence.*

- Attribute(s) Mentioned: _____
- Evidence (Quote):

6. **ROI Assessment** *Based on your findings for Return (R) and Investment (I), would you classify the ROI for fixing this issue as high or low? Briefly explain why.*

7. **Task Feedback** *What was the biggest challenge you faced while analyzing this ticket? (e.g., difficulty finding data, unclear discussions, etc.)*

Issue Ticket Analysis: AVRO-1089

1. **Performance Problem Summary** *In 1-3 sentences, what is the core performance problem described in this issue ticket?*

2. **Profiling Data** *Quote the exact sentence(s) from the ticket's description or comments that contain performance-related data or observations.*

3. **Return (R)** *How much time (or %) was the performance improved? Extract or calculate this from the profiling data.*

4. **Investment (I)** *How many unique developers participated, and what is the total number of comments?*

- Unique Developers: _____
- Total Comments: _____

5. **Analysis of Other Quality Attributes** *Were other quality attributes (e.g., maintainability, readability) mentioned? If so, provide the quote as evidence.*

- Attribute(s) Mentioned: _____
- Evidence (Quote):

6. **ROI Assessment** *Based on your findings for Return (R) and Investment (I), would you classify the ROI for fixing this issue as high or low? Briefly explain why.*

7. **Task Feedback** *What was the biggest challenge you faced while analyzing this ticket? (e.g., difficulty finding data, unclear discussions, etc.)*

Issue Ticket Analysis: AVRO-1090

1. **Performance Problem Summary** *In 1-3 sentences, what is the core performance problem described in this issue ticket?*

2. **Profiling Data** *Quote the exact sentence(s) from the ticket's description or comments that contain performance-related data or observations.*

3. **Return (R)** *How much time (or %) was the performance improved? Extract or calculate this from the profiling data.*

4. **Investment (I)** *How many unique developers participated, and what is the total number of comments?*

- Unique Developers: _____
- Total Comments: _____

5. **Analysis of Other Quality Attributes** *Were other quality attributes (e.g., maintainability, readability) mentioned? If so, provide the quote as evidence.*

- Attribute(s) Mentioned: _____
- Evidence (Quote):

6. **ROI Assessment** *Based on your findings for Return (R) and Investment (I), would you classify the ROI for fixing this issue as high or low? Briefly explain why.*

7. **Task Feedback** *What was the biggest challenge you faced while analyzing this ticket? (e.g., difficulty finding data, unclear discussions, etc.)*

Issue Ticket Analysis: **AVRO-1348**

1. **Performance Problem Summary** *In 1-3 sentences, what is the core performance problem described in this issue ticket?*

2. **Profiling Data** *Quote the exact sentence(s) from the ticket's description or comments that contain performance-related data or observations.*

3. **Return (R)** *How much time (or %) was the performance improved? Extract or calculate this from the profiling data.*

4. **Investment (I)** *How many unique developers participated, and what is the total number of comments?*

- Unique Developers: _____
- Total Comments: _____

5. **Analysis of Other Quality Attributes** *Were other quality attributes (e.g., maintainability, readability) mentioned? If so, provide the quote as evidence.*

- Attribute(s) Mentioned: _____
- Evidence (Quote):

6. **ROI Assessment** *Based on your findings for Return (R) and Investment (I), would you classify the ROI for fixing this issue as high or low? Briefly explain why.*

7. **Task Feedback** *What was the biggest challenge you faced while analyzing this ticket? (e.g., difficulty finding data, unclear discussions, etc.)*
