

INFO-H420  
Management of Data Science and  
Business Workflows  
*Practice Session – Solutions*  
*Process Mining*

Dimitris SACHARIDIS

# Process Mining with Apromore

- <https://apromore.com/join-academic-alliance/>

Once you have a license:

- <https://academic-eu.apromore.org/>
- Username: Dimitris.Dimitriadis
- Password: in course

# Exercise 1

Let's analyze the Procure-to-Pay log.

Here's the process description.

- *A worker (the 'requester') wants to buy a new computer*
- *The requester seeks approval from a manager (the 'requester manager') for the purchase*
- *The request goes to the purchasing department, and a purchasing agent places an order*
- *The supplier fulfils the order and sends an invoice*
- *Finally, an invoice is released and paid by the financial manager.*

Answer these questions.

1. What are the different ways in which this process may end?
2. Are there rework loops?
3. Are there some activities that are sometimes skipped?

# Exercise 1 – Solutions

1. What are the different ways in which this process may end?

Purchase requisition rejected

Quotation request rejected

Invoice Paid

2. Are there rework loops?

Yes, 4 rework loops

3. Are there some activities that are sometimes skipped?

Yes, for all the processes, they are sometimes skipped, except for the first task “Create Purchase Requisition”.

## Exercise 2

Continuing with the Procure-to-Pay log, answer these questions.

1. How many cases had to settle a dispute with the purchasing agent?
2. Is there a difference in average duration (cycle time) for the cases that had to settle a dispute with the purchasing agent, compared to the ones that did not? (Make sure you only compare cases that reach the endpoint 'Pay invoice').
3. What's the percentage of cases that complete without an amendment?
4. And the percentage of cases that get paid without an amendment?

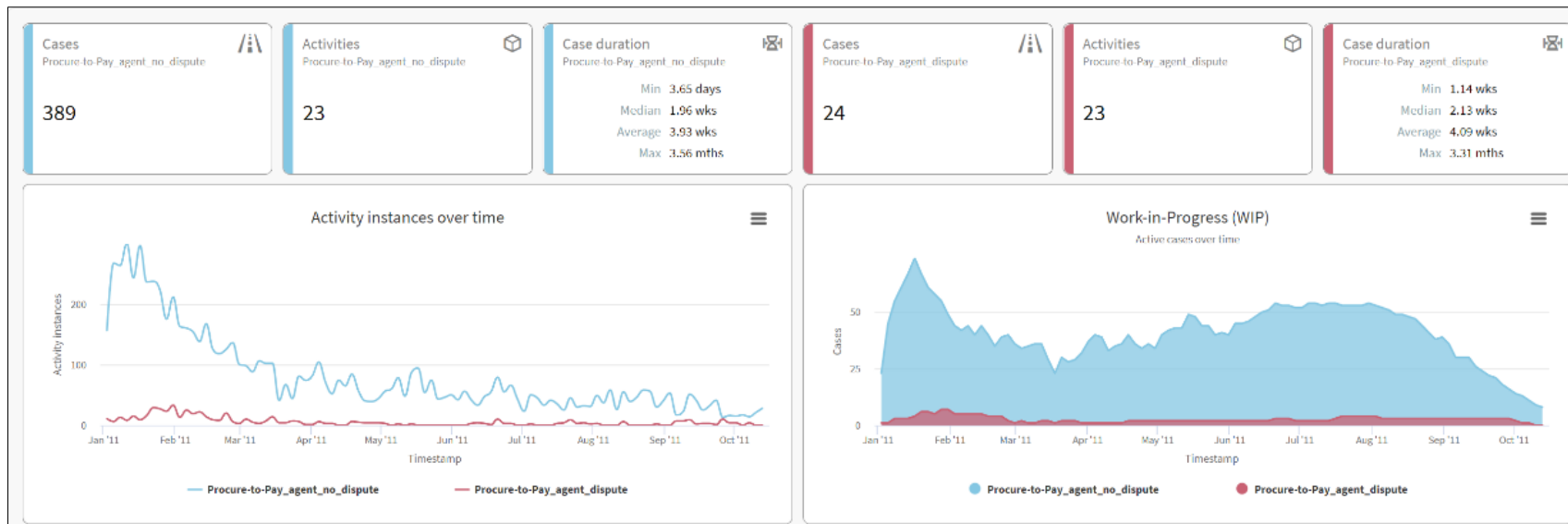
# Exercise 2 – Solutions

1. How many cases had to settle a dispute with the purchasing agent?

24 cases

1. Is there a difference in average duration (cycle time) for the cases that had to settle a dispute with the purchasing agent, compared to the ones that did not? (Make sure you only compare cases that reach the endpoint 'Pay invoice').

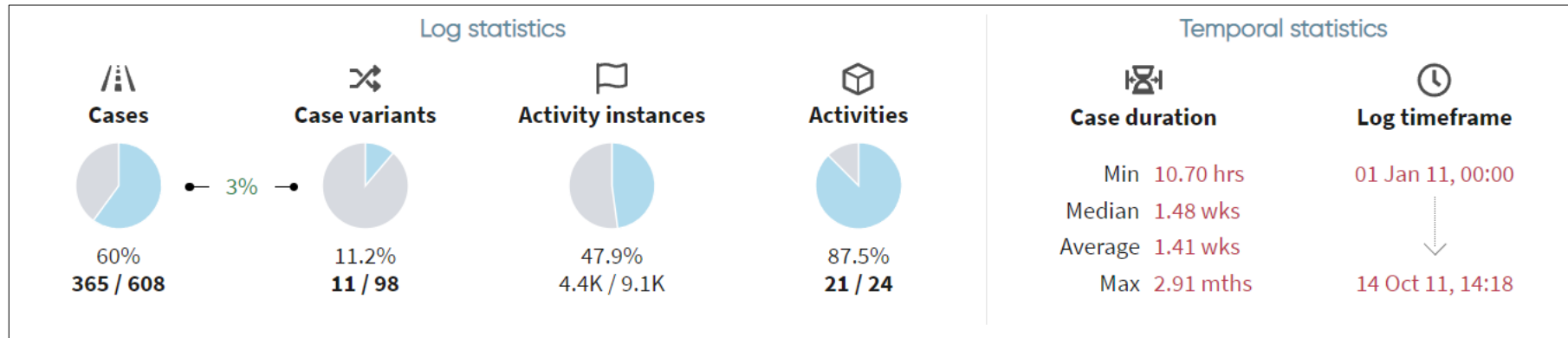
Yes, there is a difference, those with a dispute take on average 4.09 weeks as compared to those without a dispute (3.93 weeks), and the difference is even more evident when we compare the minimum case duration, of 1.14 weeks as compared to 3.65 days. (Save the filters on separate log files.)



## Exercise 2 – Solutions

3. What's the percentage of cases that complete without an amendment?

60%



3. And the percentage of cases that get paid without an amendment?

36.5%

