Conformance Checking
Alignments

BPI-Instruction 9
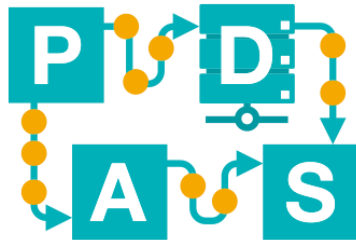
P D A S **Chair of Process and Data Science**

RWTH AACHEN UNIVERSITY

Exercise 1

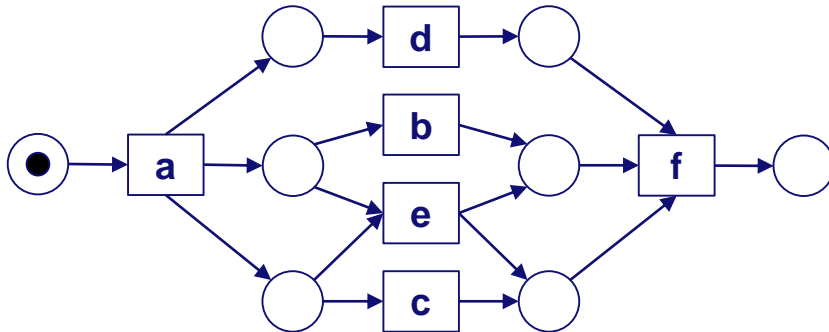**What is the cost of replaying the following trace on the given model?**

$\langle a, b, d, e, g \rangle$

Exercise 2

1. What is the closest path to the following trace in the given model? What is the cost of this alignment?

2. How many optimal alignments are possible between the given model and trace?

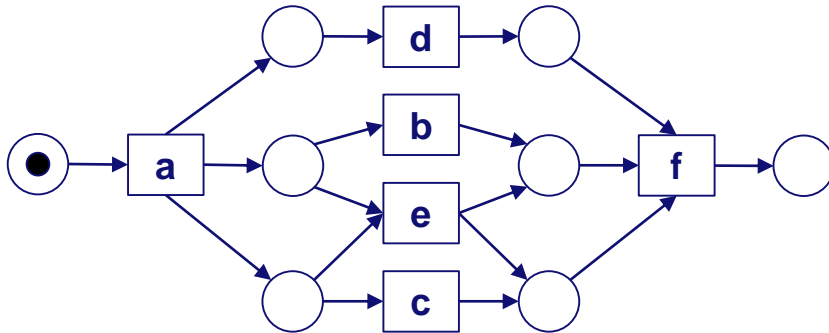**3. What is the fitness based on the alignment?**

$\langle a, e, c, d \rangle$

Exercise 3

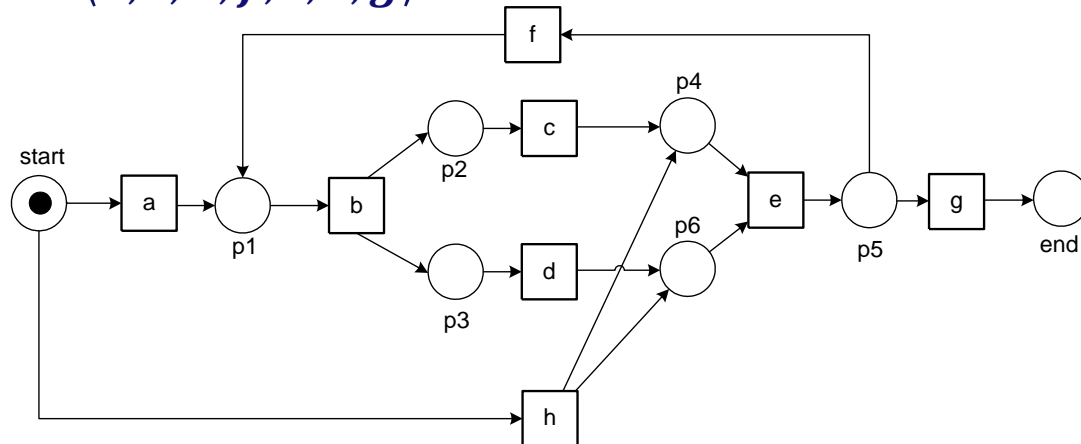**What is the fitness based on the alignment for the given trace and model?**

$\langle a \rangle$

Exercise 4

1. What is the closest path to the following trace in the given model? What is the cost of this alignment?

2. How many optimal alignments are possible between the given model and trace?

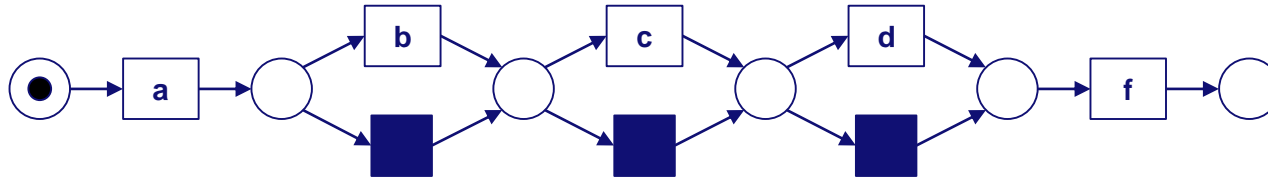**3. What is the fitness based on the alignment?**

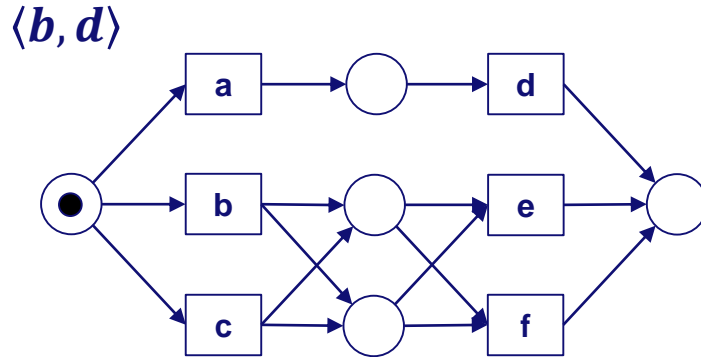$\langle a, c, d, f, c, e, g \rangle$

Exercise 5

What is the fitness based on the alignment for the given trace and the model?
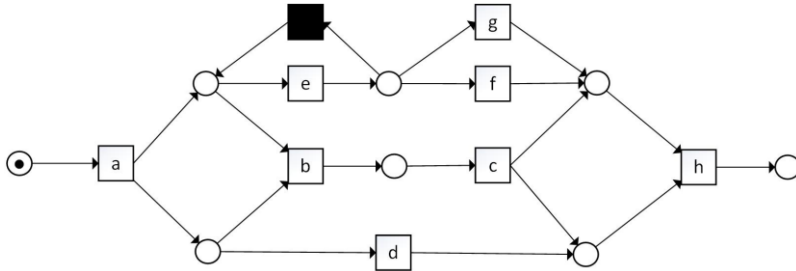
$\langle a, d, b \rangle$

Exercise 6

1. **What is the fitness based on the alignment for the given trace and the model?**

2. **How many optimal alignments are there?**

Exercise 7

Complete the following table and then calculate the overall fitness.

$$L = \left[\langle a, b, c\rangle^{25}, \langle a, b, d\rangle^{5}, \langle a, e, d, h\rangle^{20}, \langle a, e, b, c, h\rangle^{50}\right]$$

	frequency	Optimal alignment cost	Number of optimal alignments	Alignment fitness
$\langle a, b, c\rangle$	25			
$\langle a, b, d\rangle$	5			
$\langle a, e, d, h\rangle$	20			
$\langle a, e, b, c, h\rangle$	50			