

Process Mining



Lesson 0 – Course Introduction

Who I am

I'm Riccardo Cognini

I'm a PhD in Computer Science

My research area is Business Process Management

Up till now, I'm a software engineer at e-Lios

...and I'm your Process Mining teacher!

Process Mining Course

Name: **Process Mining**

CFU: **6**

Teacher: **Riccardo Cognini**

Mail: riccardo.cognini@unicam.it

Course Web Site: didattica.cs.unicam.it/doku.php

Course Materials: **Slide**

Book: **Process Mining – Discovery, Conformance and Enhancement of Business Processes (Springer)**

Date and Time

Monday: 4 PM to 6 PM

Thursday: 4 PM to 6 PM

Support can be organized by mail. I can be in the Computer Science Department every day after the 6 PM.

Project (*3/4 students per group*). Study a specific research topics in the area of Process Mining and expose the result of the reaseach to the class (from 0 to 6 pt.) – **not mandatory!**

Write Exam. (from 0 to 27pt.)

Exam

- 02/02/2018 11:00
- 28/02/2018 16:00
- 14/06/2018 16:00
- 15/07/2018 16:00
- 20/09/2018 16:00
- 14/02/2019 16:00

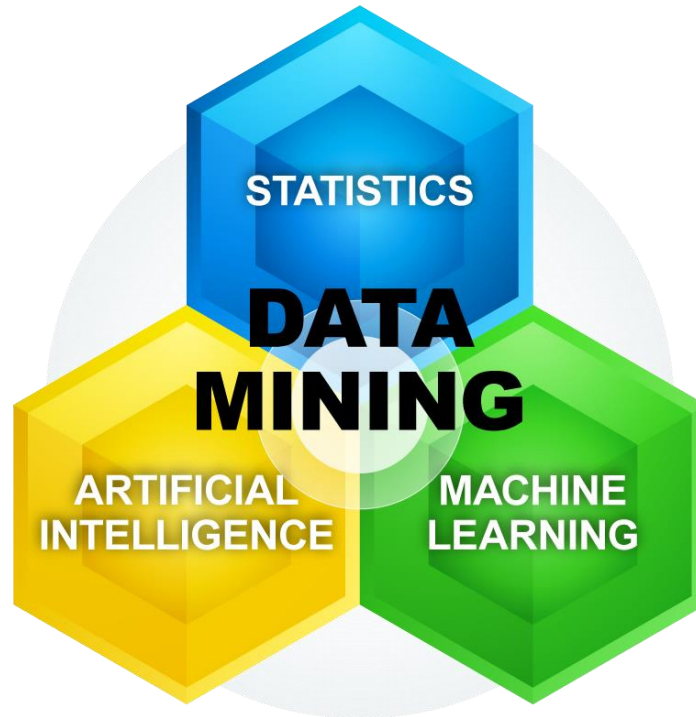
But, I will be available when you want

TO DO the Exam you Must:

Sign up on ESSE3

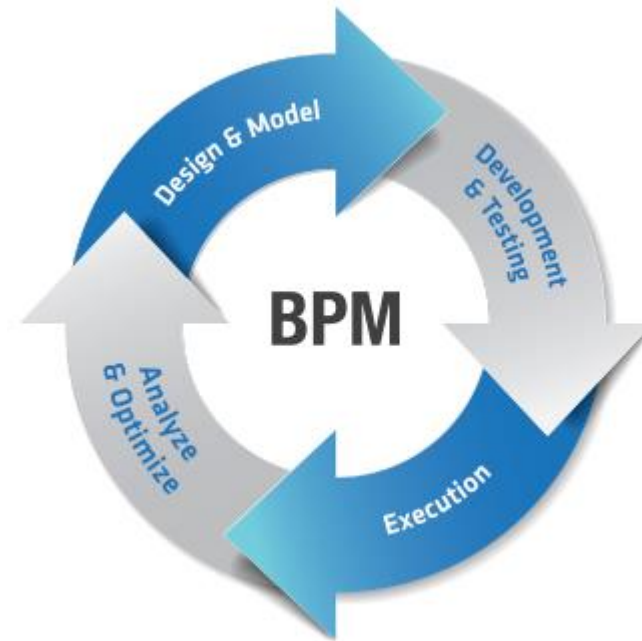
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Data Mining (a quick summary)



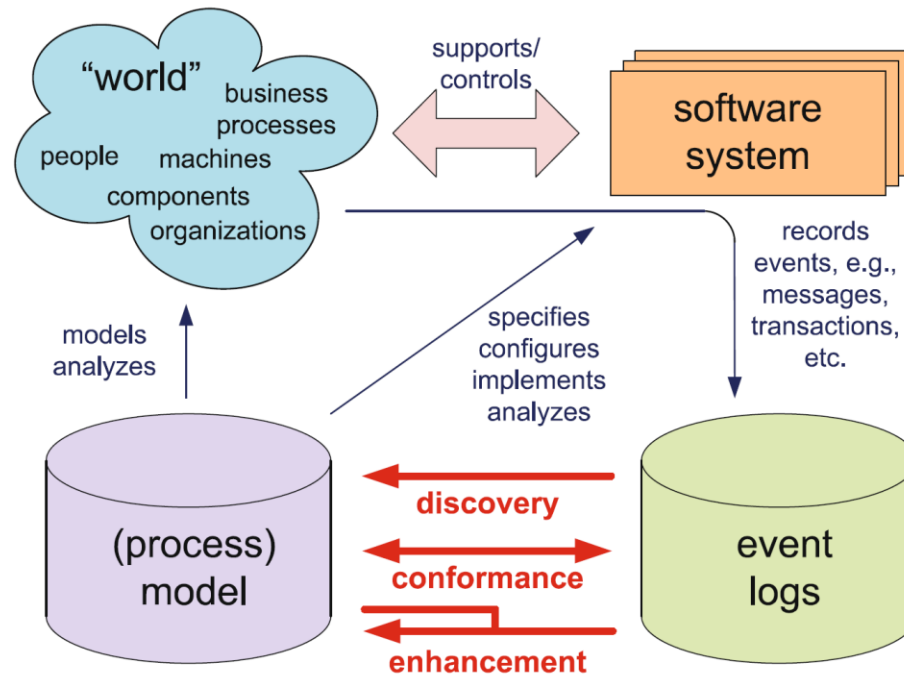
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Business Process Management and Business Process Modeling (a quick summary)



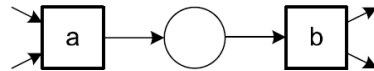
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Process Mining types

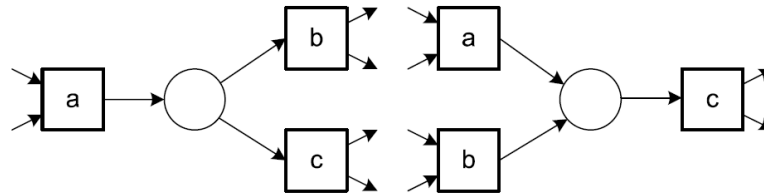


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Process Discovery: the alpha Algorithm

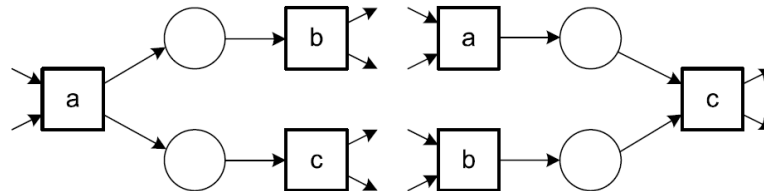


(a) sequence pattern: $a \rightarrow b$



(b) XOR-split pattern:
 $a \rightarrow b$, $a \rightarrow c$, and $b \# c$

(c) XOR-join pattern:
 $a \rightarrow c$, $b \rightarrow c$, and $a \# b$

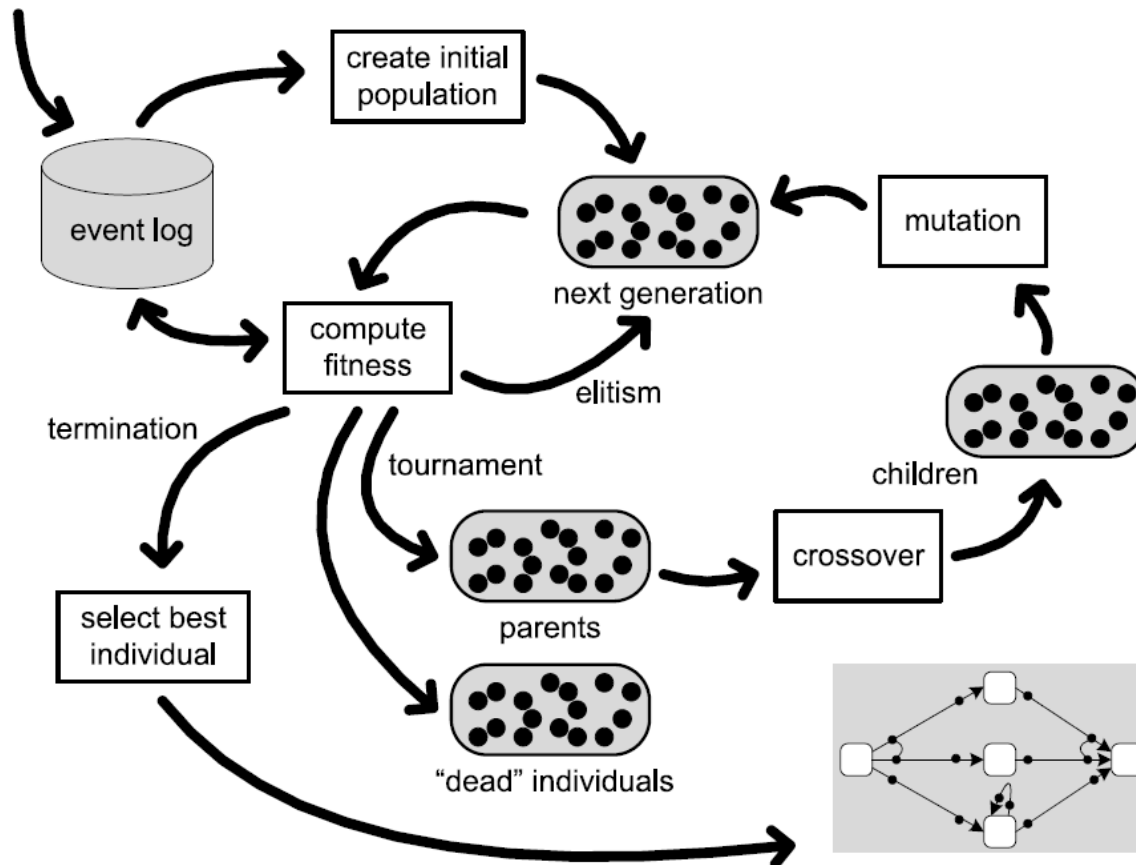


(d) AND-split pattern:
 $a \rightarrow b$, $a \rightarrow c$, and $b \parallel c$

(e) AND-join pattern:
 $a \rightarrow c$, $b \rightarrow c$, and $a \parallel b$

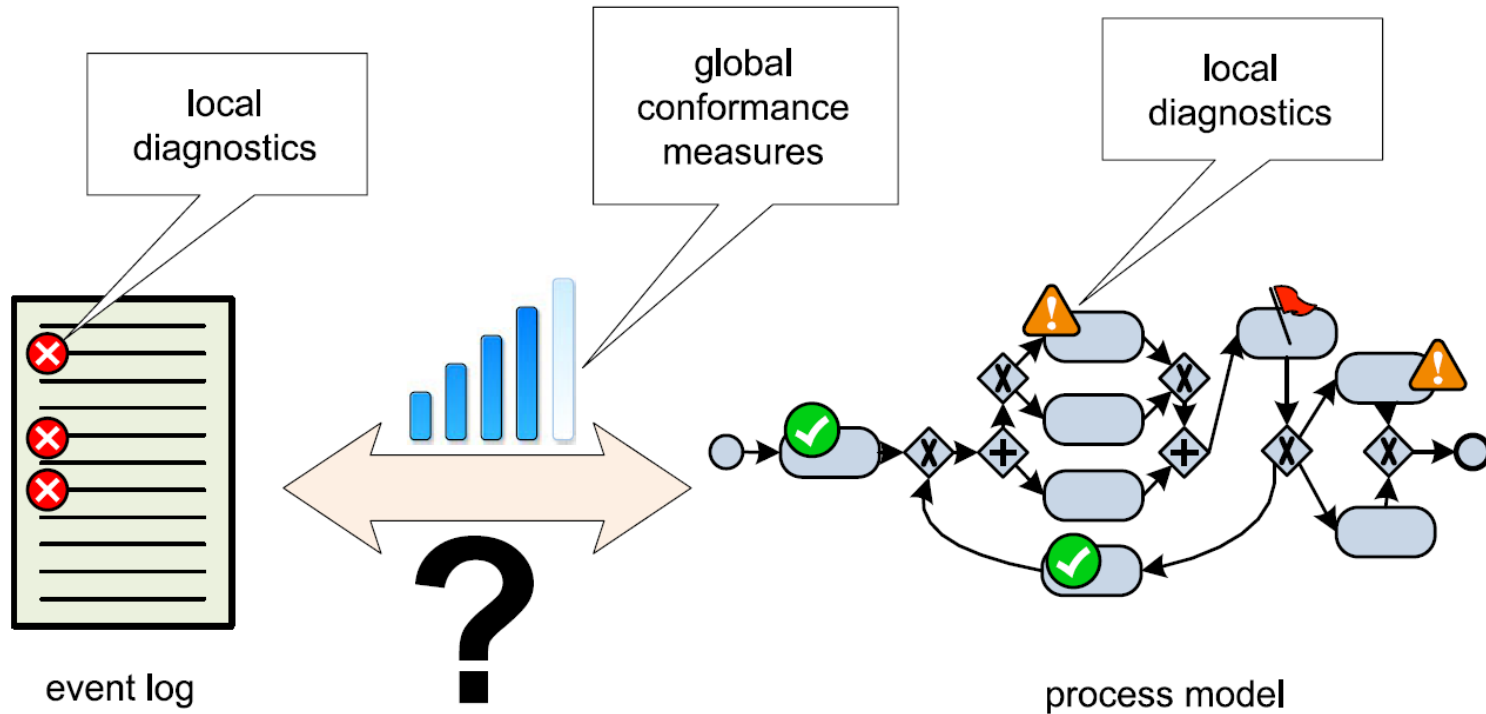
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Process Discovery: other techniques



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Conformance Checking



QUESTIONS??