

Towards a standard for computer-based guidelines representation and execution: the GLARE proposal

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Background

Clinical guidelines are a mean for specifying the “best” clinical procedures and for standardizing them

Adopting (computer-based) clinical guidelines is advantageous

Different roles: support, critique, evaluation, education,

Domain-independent tools to acquire (and execute) clinical guidelines

Many different domain-independent computer systems managing clinical guidelines (e.g., Asgaard, GEM, Gliff, Guide, PROforma,...)

GLARE

(GuideLine Acquisition Representation and Execution)

-Joint project (started in 1997):

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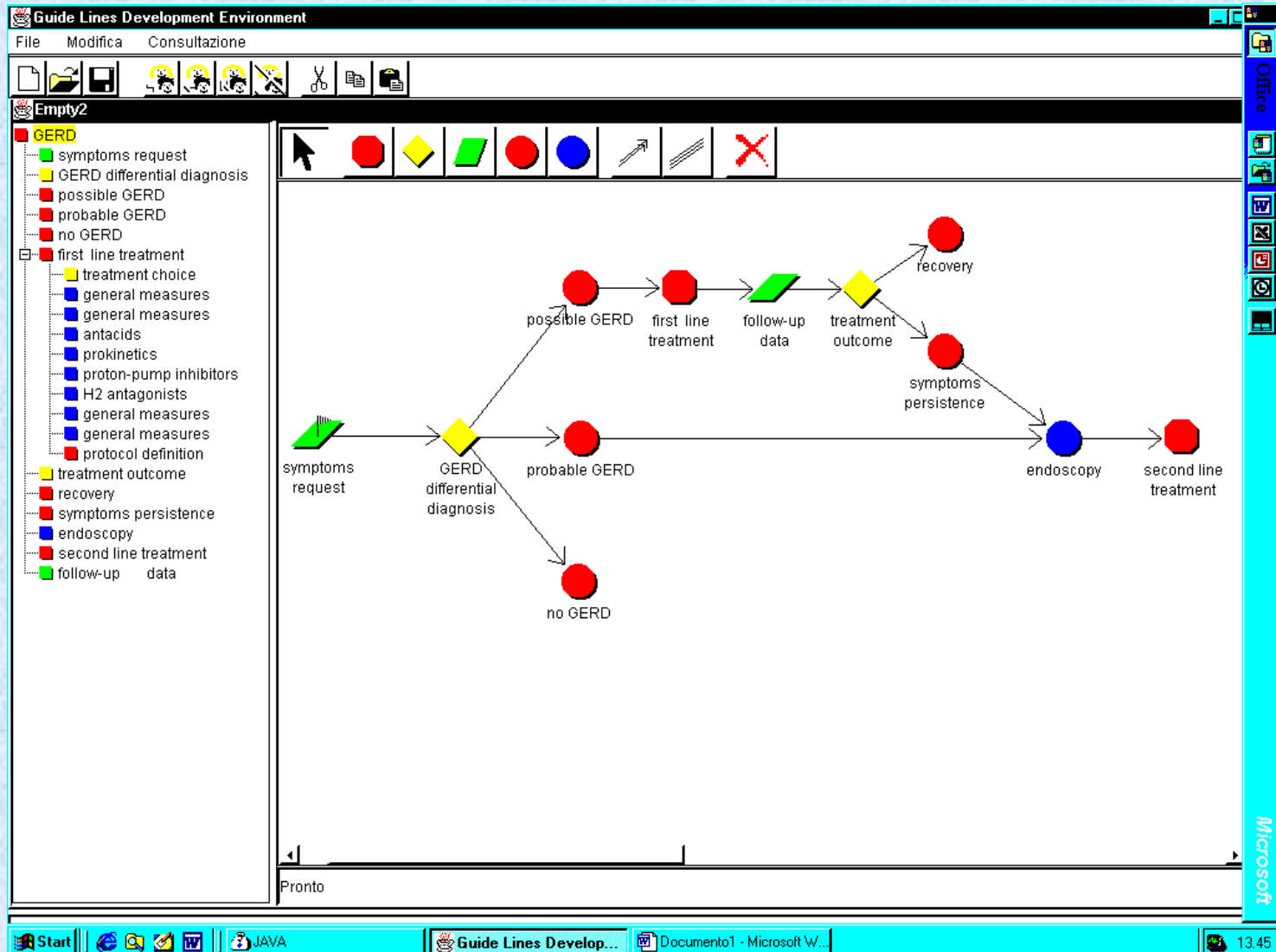
Dipartimento di Informatica, Univ. di Torino

- Domain independent

(e.g., bladder cancer, reflux esophagitis, heart failure)

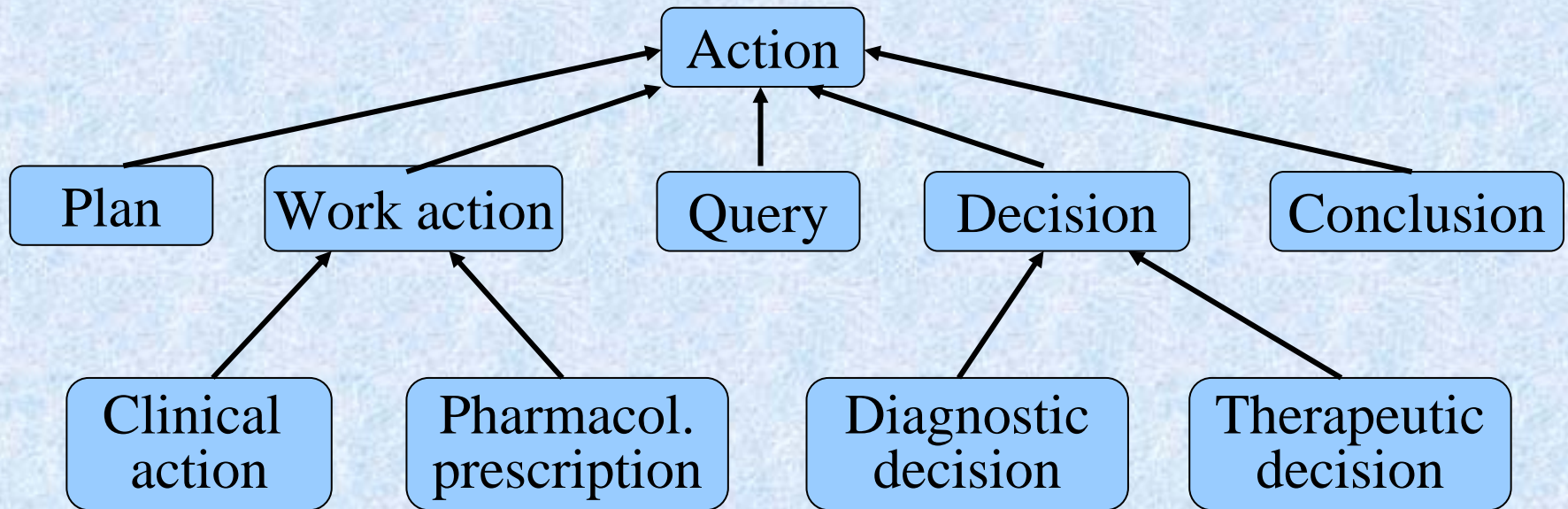
- User-friendly (limited number of primitives)

GLARE Representation Formalism



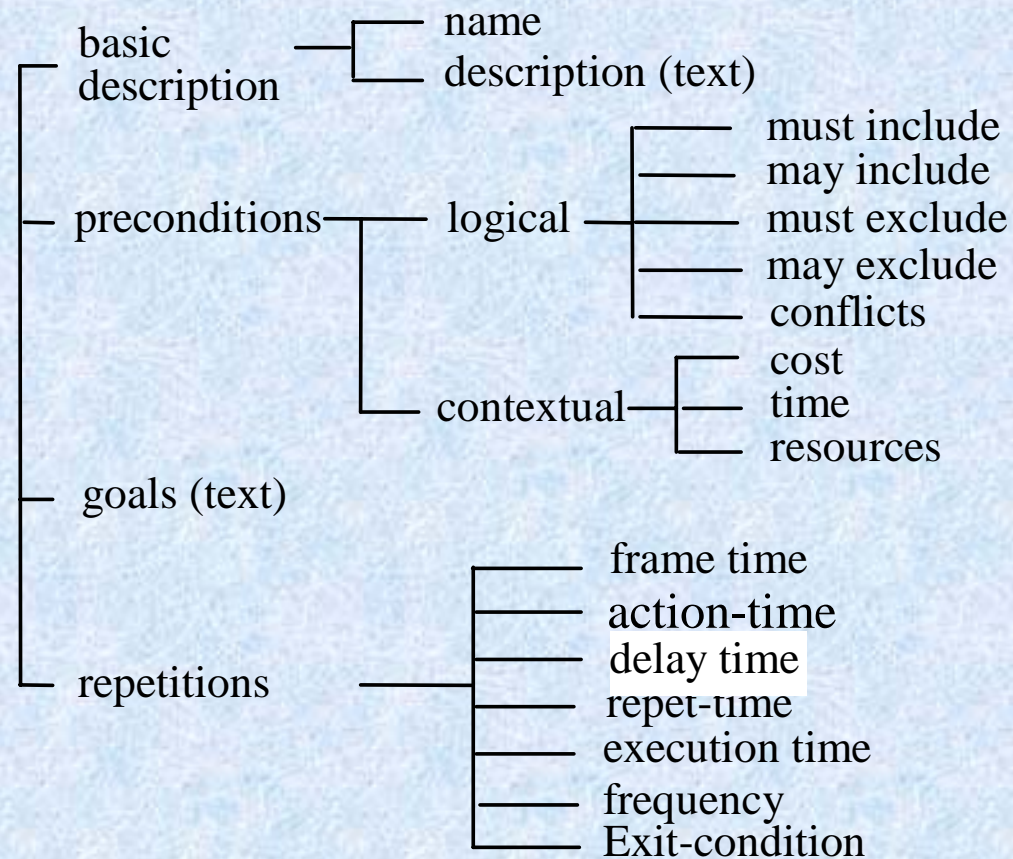
GLARE Representation Formalism

Hierarchy of Action Types



Representation Formalism

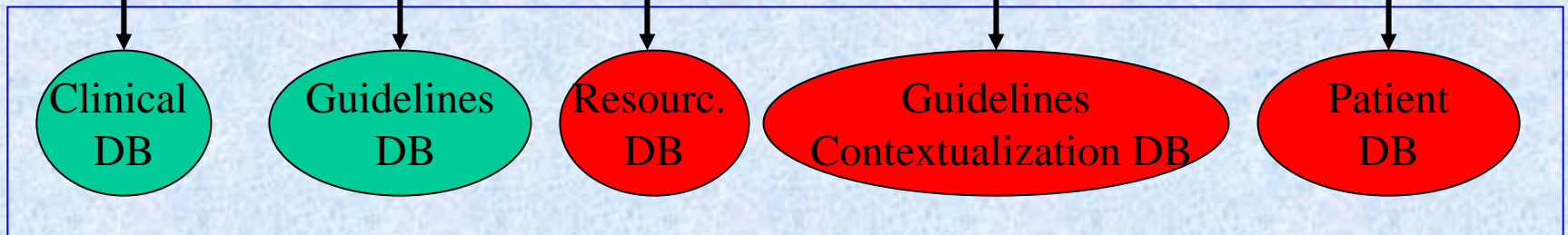
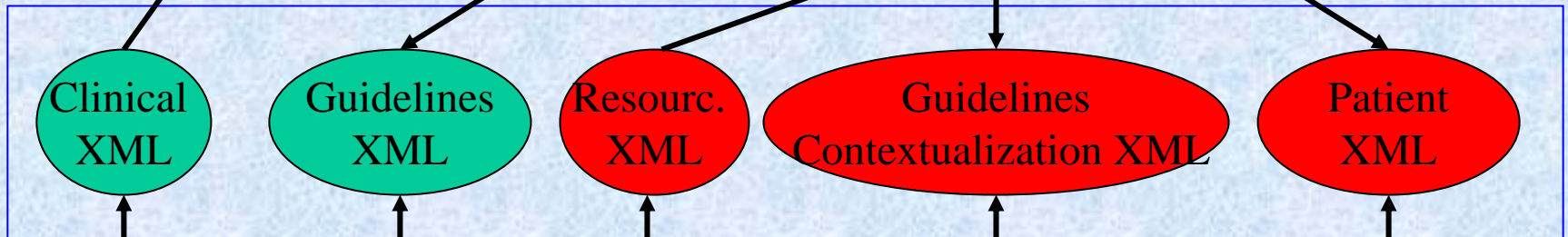
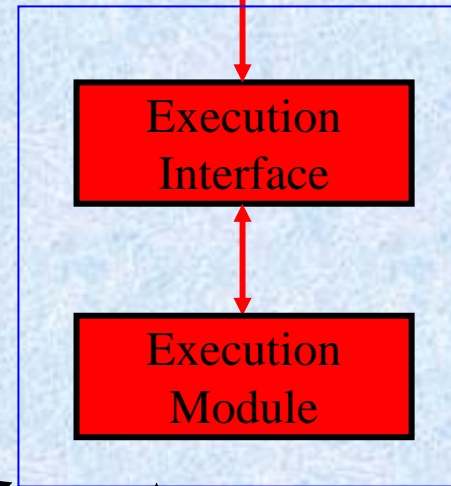
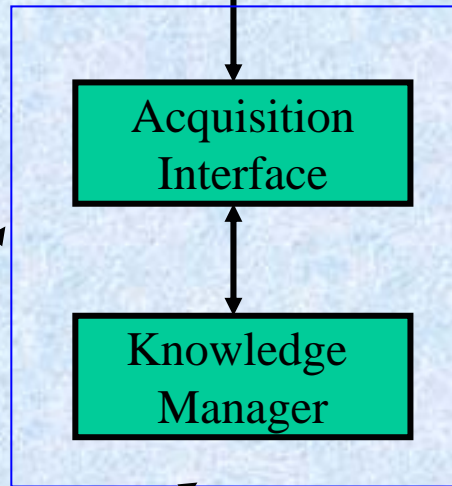
description of a clinical action



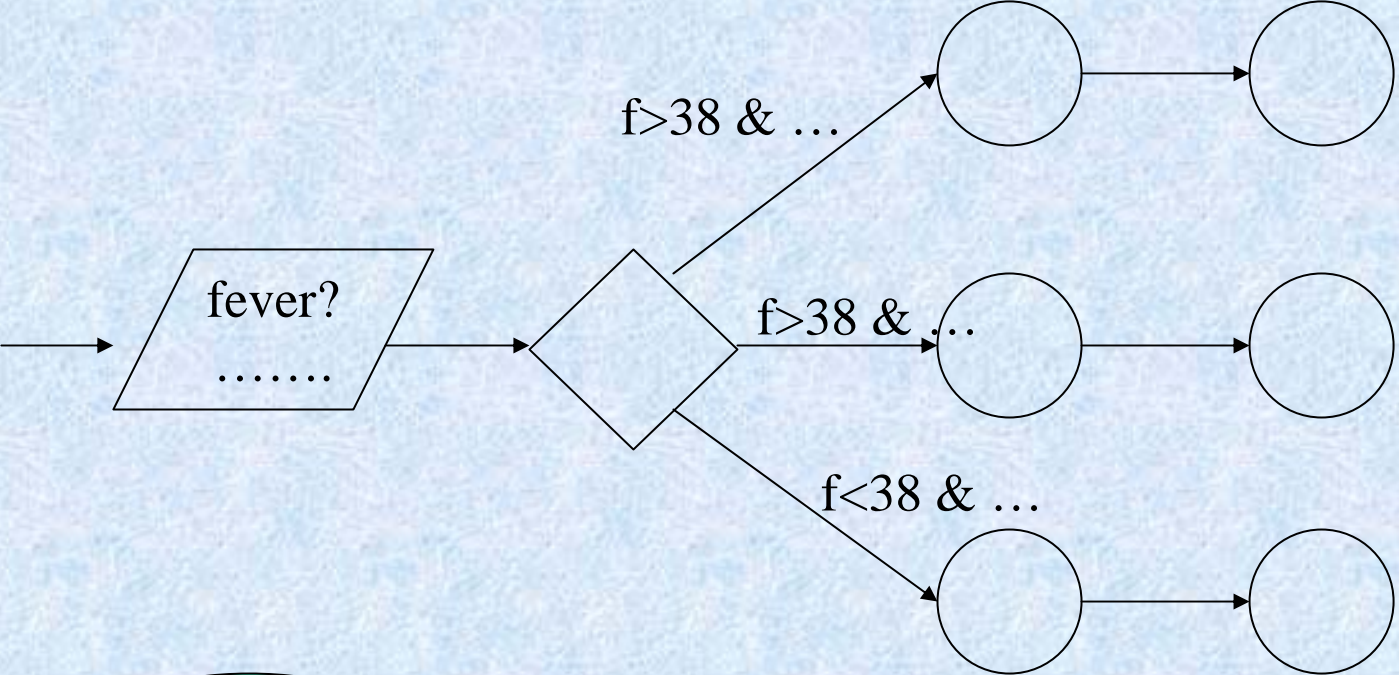
GLARE's Architecture (simpl.)

Expert Physician

User Physician

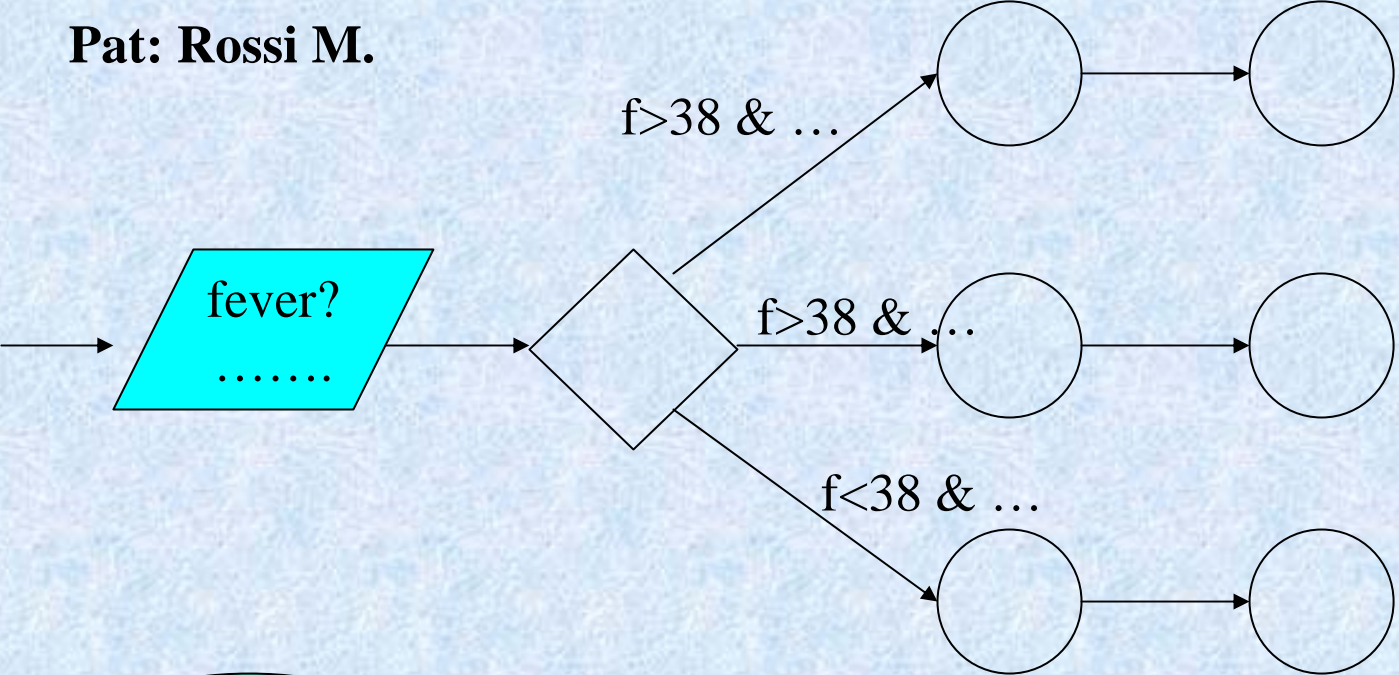


Execution



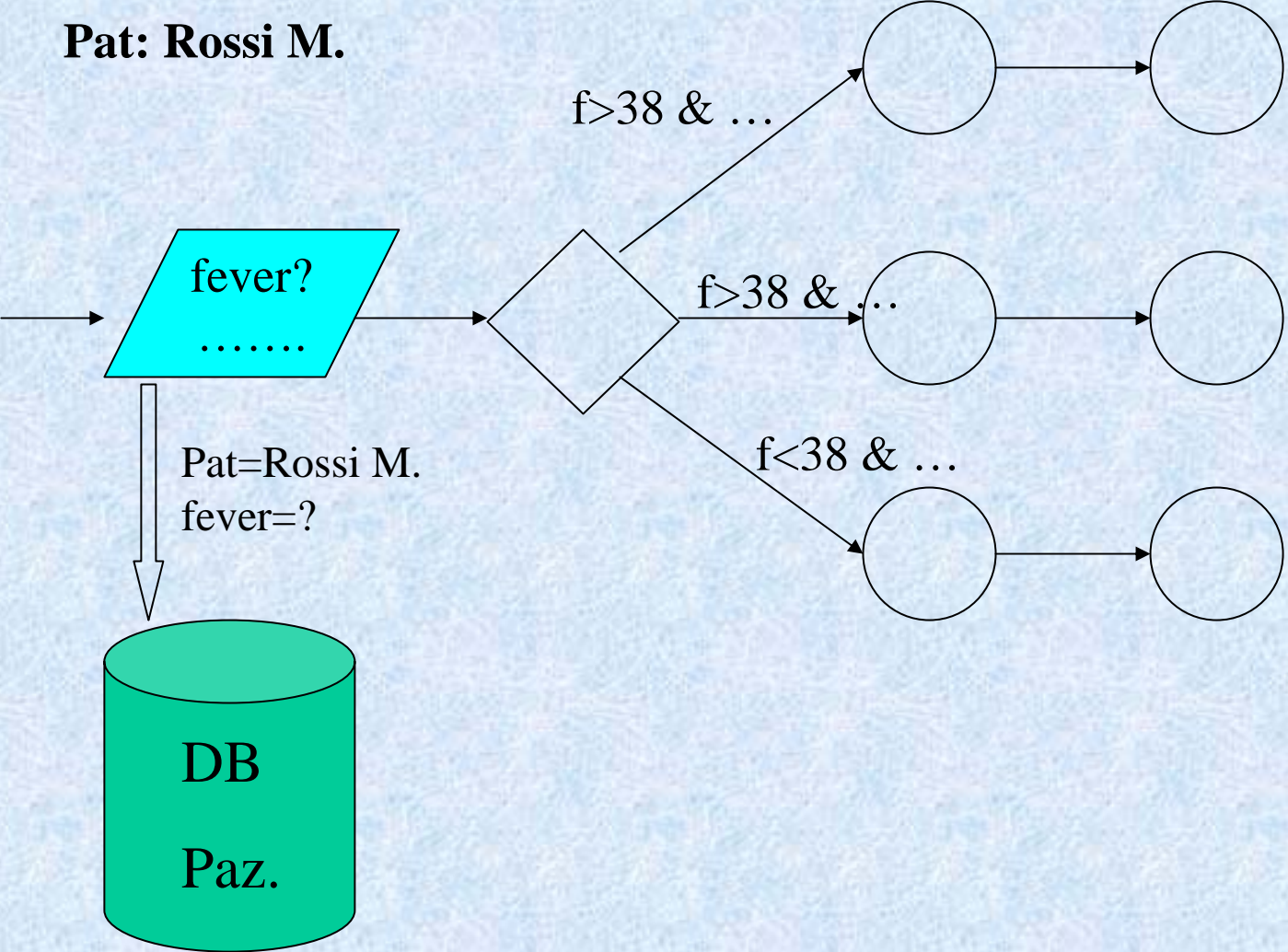
Execution

Pat: Rossi M.



Execution

Pat: Rossi M.



fever?

.....

Pat=Rossi M.
fever=?

DB

Paz.

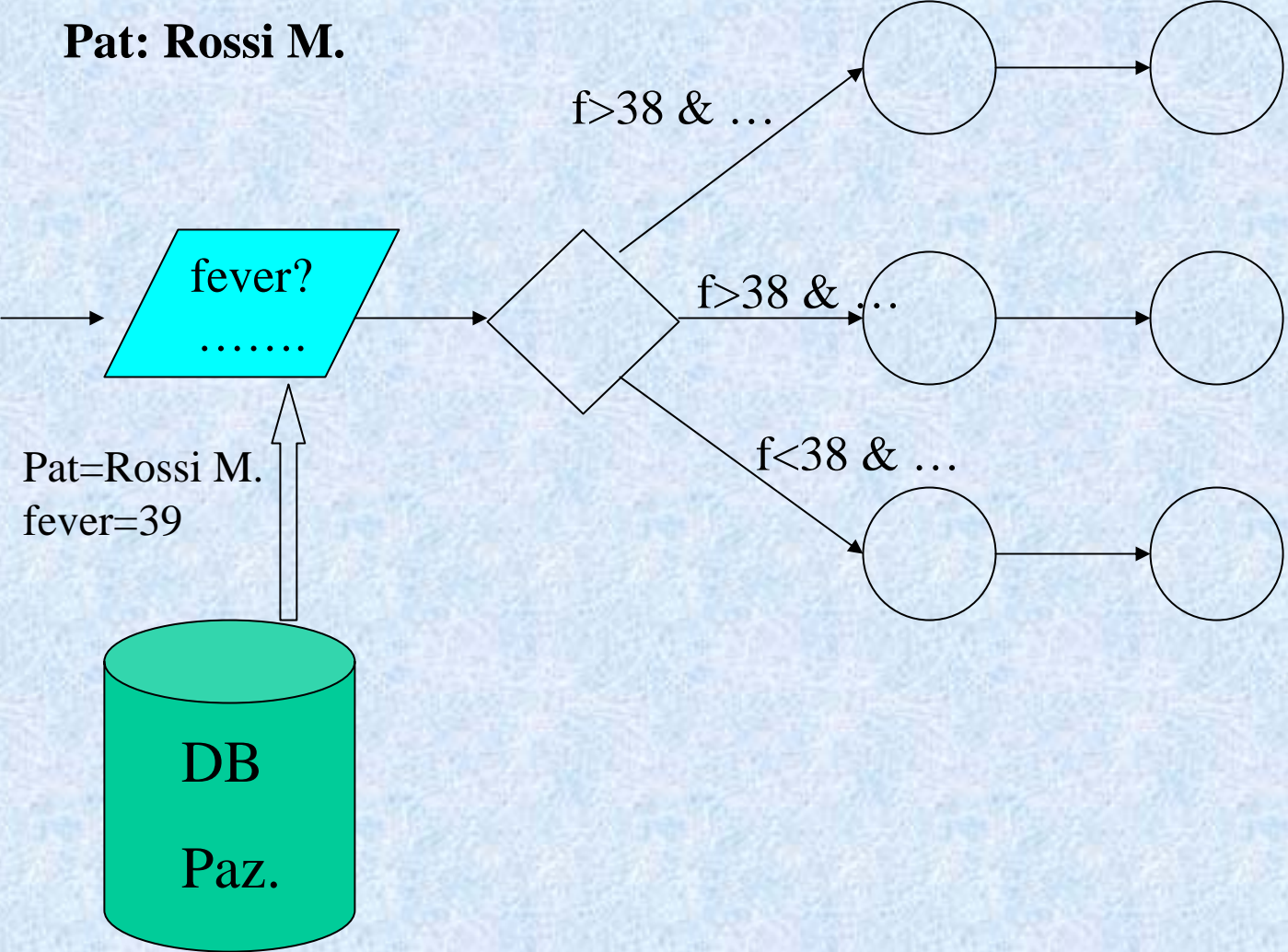
f > 38 & ...

f > 38 & ...

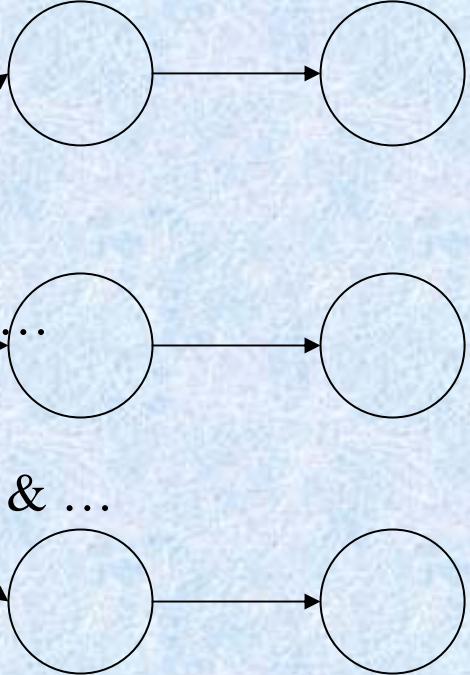
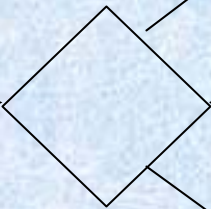
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Execution

Pat: Rossi M.

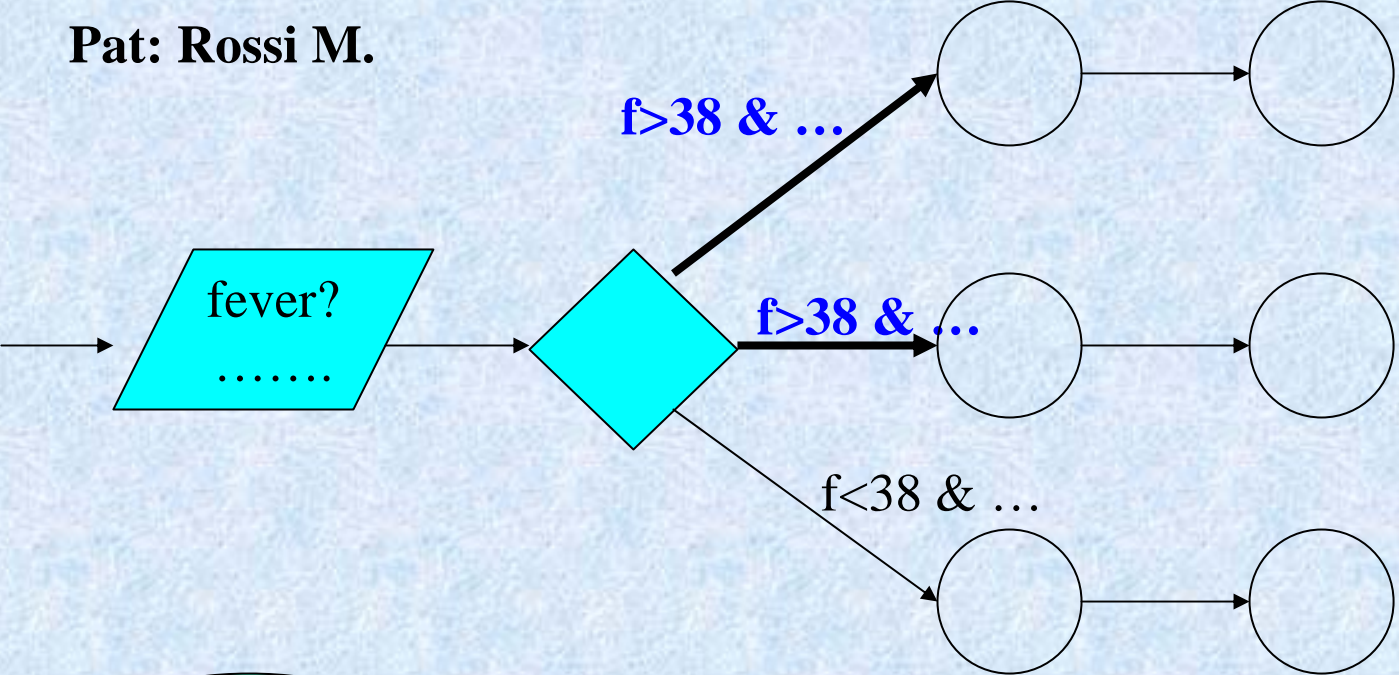


Pat=Rossi M.
fever=39



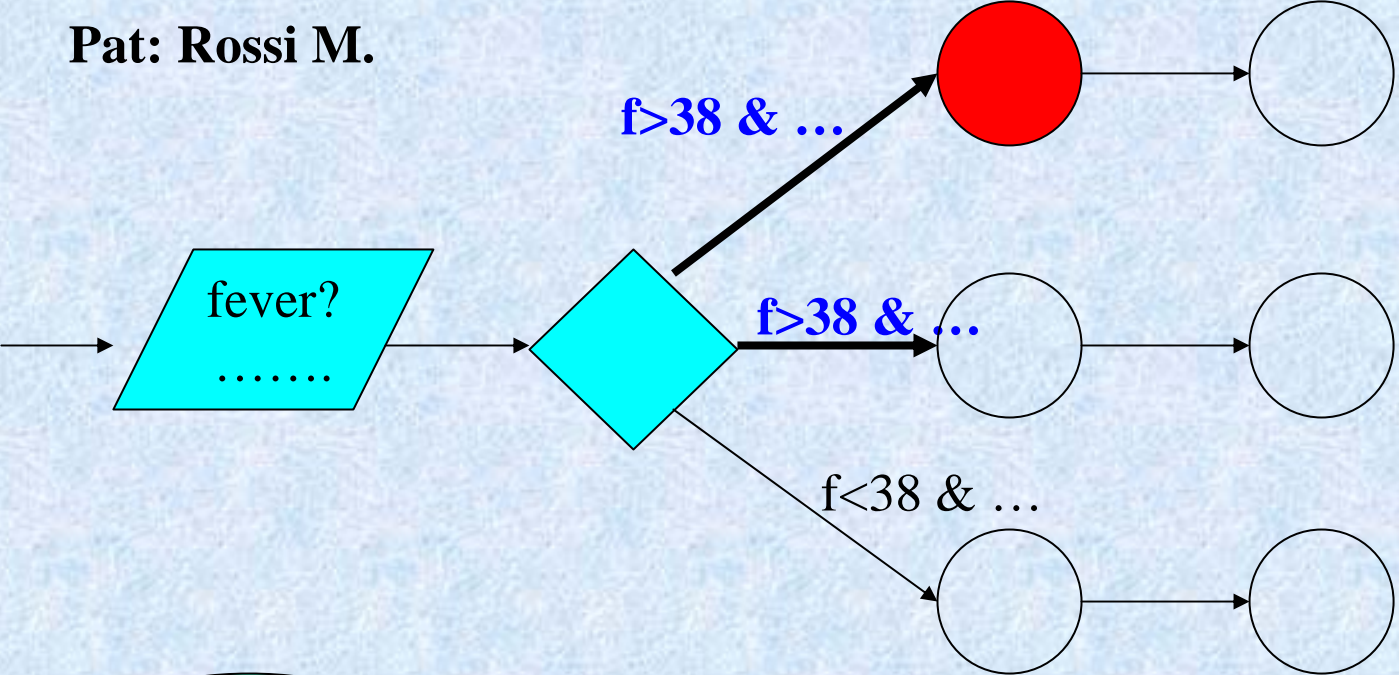
Execution

Pat: Rossi M.



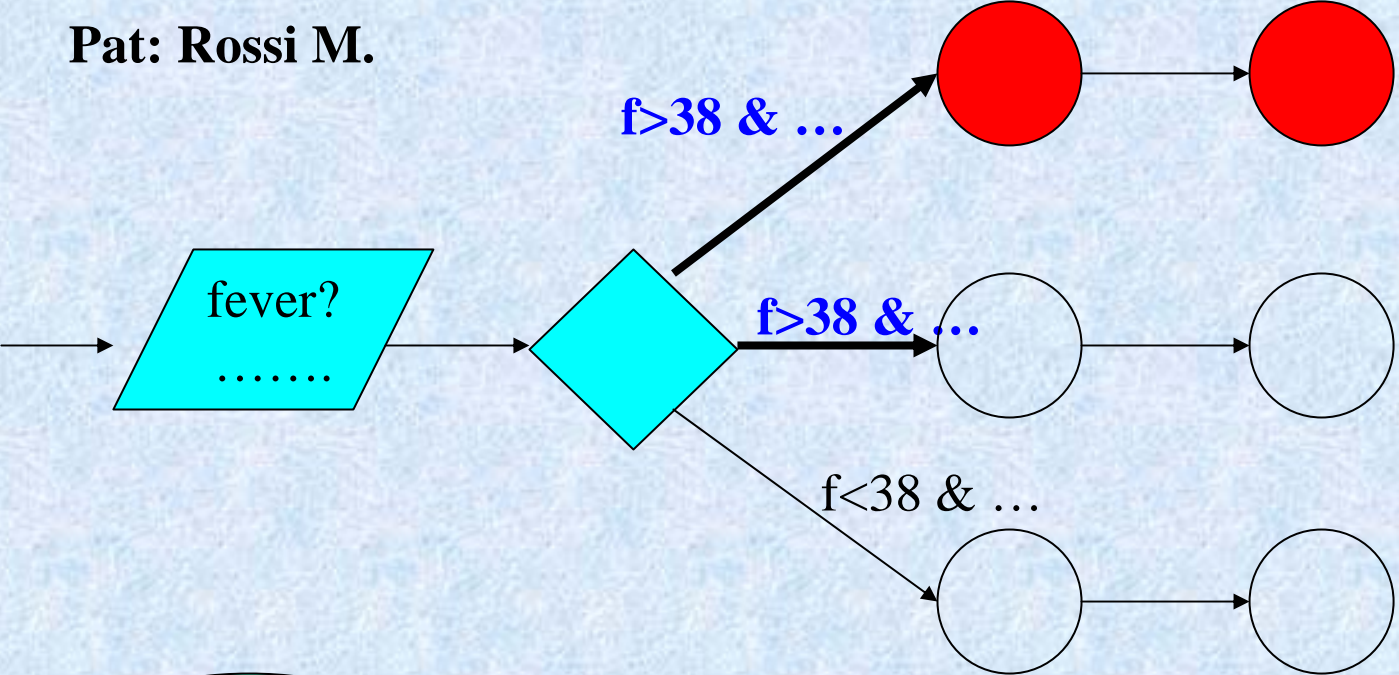
Execution

Pat: Rossi M.



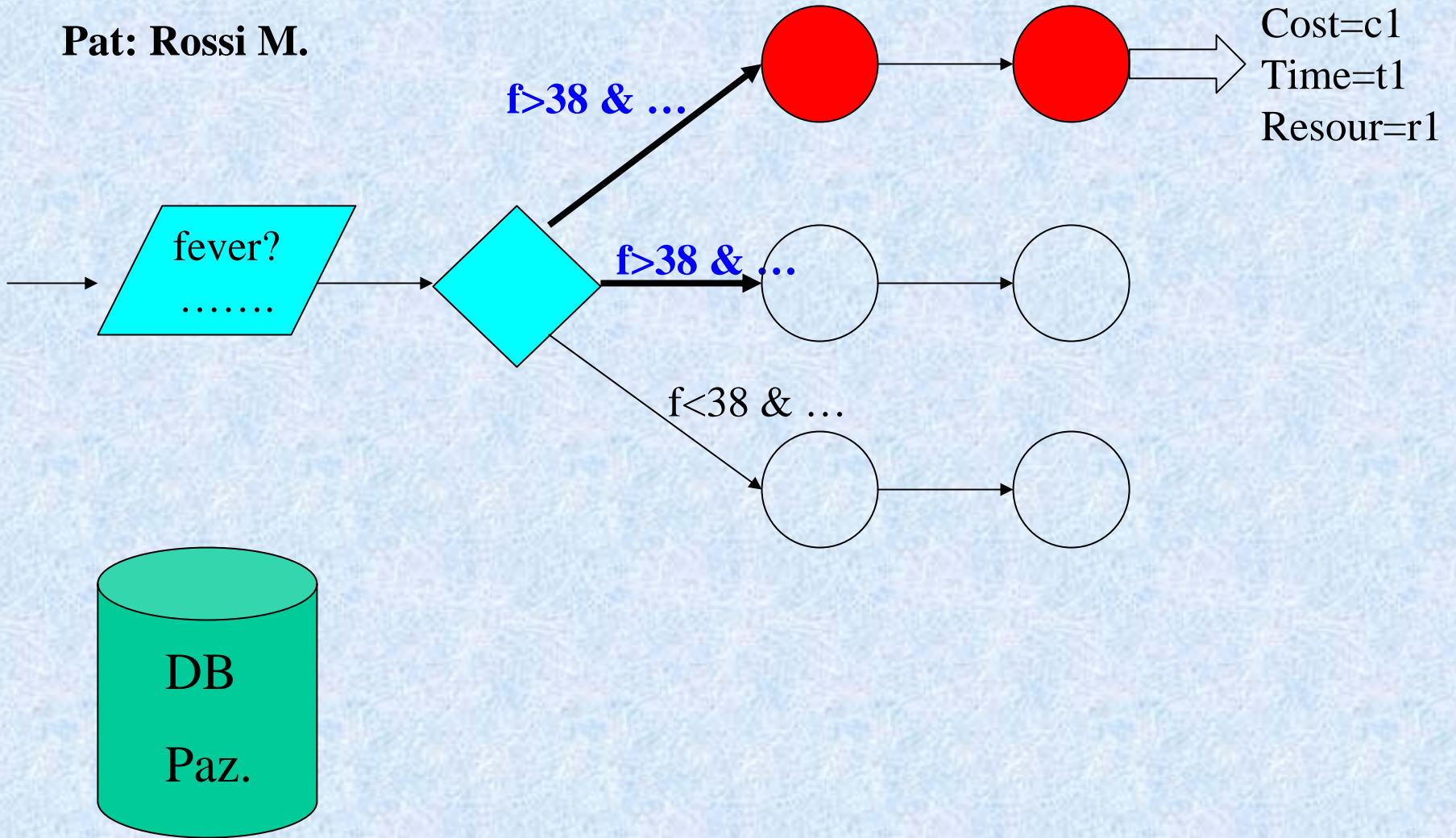
Execution

Pat: Rossi M.



Execution

Pat: Rossi M.



ADVANCED FEATURES

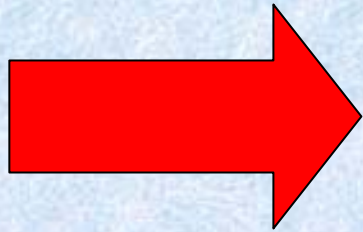
- “intelligent” consistency checks (acquisition and execution)
- Temporal reasoning facilities
- “What if” simulation facility
- Semi-automatic contextualization (resources + SW environment)

RECENT PUBLICATIONS

AIMJ [2001]; JAMIA [2002, 2003]; Medinfo [2004];
CGP (2) [2004]; ECAI [2004]; IPMU [2004]

PROJECTS & COOPERATIONS

- Azienda Ospedaliera S. Giovanni Battista, Torino
- Openclinical – Knowledge Management for Medical Care-
www.openclinical.org



“DEMO” of GLARE

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