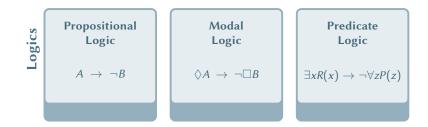
LogInf 2021

Learning Logic in the Web

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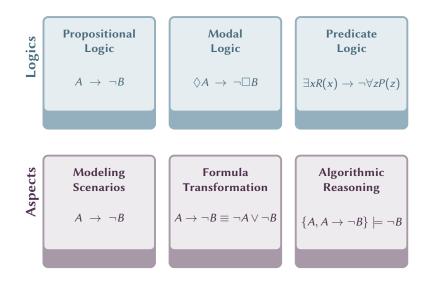
What we teach at our universities

Undergraduate course Logic for Computer Scientists



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How we teach logic

Exercise: Analysis of a software problem

An analysis has revealed the following dependencies among three components of a software system:

- 1. If the backend is working correctly, the database is also working correctly.
- 2. The backend is only working incorrectly if neither the database nor the user interface is working correctly.
- 3. At least one component works correctly.

How we teach logic

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Task A: m Provide a propositional formula for each dependency.

modeling

How we teach logic

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Task A:

modeling

Provide a propositional formula for each dependency.

Task B:transformation and reasoningShow by resolution that the dependencies implythat the database and the backend work correctly.

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- delayed feedback
- rudimentary feedback

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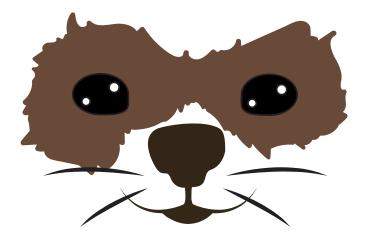
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- flexibility to freely combine atomic exercises into more complex exercises
- extensibility:
 - additional feedback mechanisms
 - ▶ other contents (other logics, formal languages,...)

ILTIS: Teaching Logic in the Web



Overview of supported exercises

Task	Propositional logic	Modal logic	First-order logic	
Modelling	1	√	(✔)	
Transformation	1	\checkmark	*	
Reasoning	1	\checkmark	(✔)	
Evaluation	✓	✓	*	
Model construction	1	\checkmark	(✔)	
✓: supported	(✓): basic support	🗱 : ii	💠 : in development	

(Shameless) Call for Help and Contributors

We are looking for...

Instructors who want to use ILTIS in their courses

- ▶ Interested students, PhD students, PostDocs ... for
 - laying the theoretical foundations
 - extending the coverage of topics in ILTIS

Experts in natural language processing...

... for educational tasks for bridging the gap between natural languages and formal modeling.

Contributors to the ILTIS project

Jill Berg, Lukas Dienst, Alicia Gayda, Gaetano Geck, Jonas Haldimann, Alexandra Latys, Artur Ljulin, Johannes May, Sebastian Peter, Christine Quenkert, Patrick Roy, Marko Schmellenkamp, Jonas Schmidt, Daniel Sonnabend, Felix Tschirbs, Fabian Vehlken, Cara Volbracht, Thomas Zeume

Try Iltis yourself!



https://iltis.cs.tu-dortmund.de