

# MMT Tutorial, Part 2: Application Development with MMT

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Bringing your notebook is recommended but not required.  
Attending **Part 1** is helpful but not required to follow Part 2.

# Users vs. Developers

MMT blurs distinction between users and developers

- ▶ Intended users: developers of math applications
- ▶ MMT is not an application itself
- ▶ It is an
  - ▶ API for the MMT language close relative of OMDoc
  - ▶ suite of reusable components for math applications e.g., MKM services
  - ▶ set of few example applications e.g., the IDE used in Part 1

## Extension Interfaces

MMT is highly extensible through systematically exposed extension interfaces **essentially everything can be replaced or customized**

- ▶ Interfaces for lexer, parser, checker, simplifier, prover, presenter
  - ▶ extensible by adding new rules
  - ▶ independently replaceable with custom implementations
- ▶ Adding new language features
- ▶ Import/export interfaces for integrating other formats and build targets
- ▶ Exposing functionality to outside
  - ▶ adding new command line syntax
  - ▶ web framework for adding new HTTP interfaces
- ▶ Change listening infrastructure for content events

# Overview

1. Brief introduction to MMT-based Applications
2. 3 mini-demos of prototypical MMT-based applications  
easy for attendants to understand, reprocude, modify
  - 2.1 Changing equality by adding arbitrary rewrite or computation rules
  - 2.2 Using the MMT query interfaces to build a browser-based editor
  - 2.3 Using MMT's export infrastructure to build an OpenMath Content Dictionary editor