

Introduction to **LATEX** & Overleaf

Equations, diagrams, and automated document formatting

COMPASS 2023

LaTeX (pronounced LAH-TECH) is a typesetting software system.

Write simple code → control text formatting

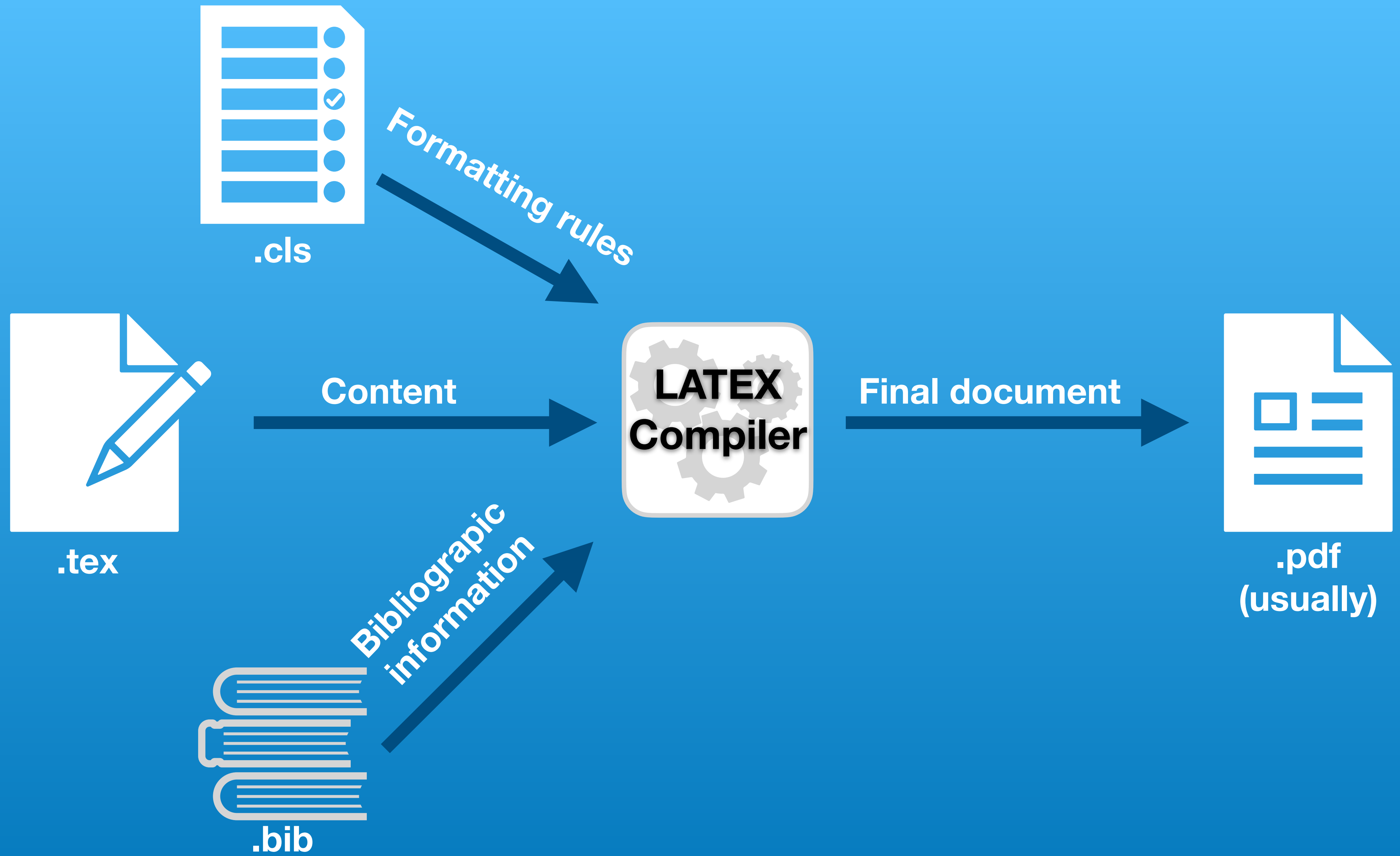
Equations:

```
\int^{\pi}_{\sqrt{e}} \sum_{i=1}^N f(x^i) \frac{\ln(x^i) - \sin(x^i / 2\pi)}{\prod_{j \geq i}^N g^{-1}(\vec{y})} dx^i
```

→

$$\int_{\sqrt{e}}^{\pi} \sum_{i=1}^N f(x^i) \frac{\ln(x^i) - \sin(x^i/2\pi)}{\prod_{j \geq i}^N g^{-1}(\vec{y})} dx^i$$

Overleaf is a cloud-based collaborative LaTeX editor
—a.k.a “Google Docs for LaTeX”.



1. Go to Overleaf

www.overleaf.com

2. Create Account / Login

3. Create “Example Project”

Equation examples

$$V_{\text{sph}} = r^3 \pi \frac{4}{3} \rightarrow V_{sph} = r^3 \pi \frac{4}{3}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\text{Big}[\sum_{k=0}^n e^{k^2}] \rightarrow \left[\sum_{k=0}^n e^{k^2} \right]$$

Math resources:

[tug.ctan.org/info/undergradmath/
undergradmath.pdf](http://tug.ctan.org/info/undergradmath/undergradmath.pdf)

detexify.kirelabs.org

Bibliography management:

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