

**PDE:**  $-\Delta u = f$

**Weak formulation:**  $a(u, w) = L(w)$   
 $a(u, w) = \int \nabla u \cdot \nabla w \, dx$   
 $L(w) = \int f w \, dx$

**UFL (Unified Form Language):**  
`a = inner(grad(u), grad(w)) * dx`  
`L = f * w * dx`

**FFC(x)**  $\rightarrow$  Poisson.h

**FIAT/Basix**

**DOLFIN(x)**

**LA Backend**

**Solution**

`problem.solve()`

