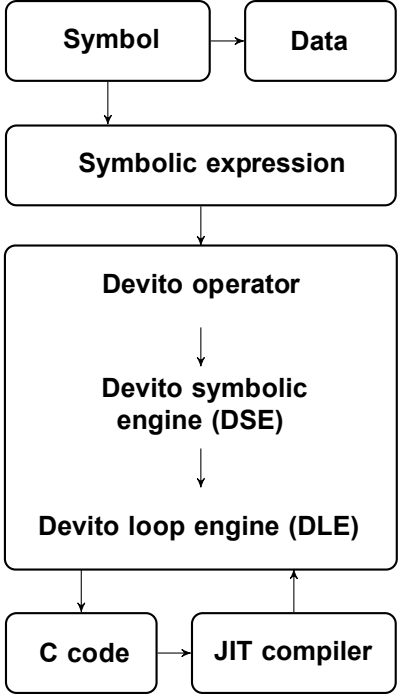


```
u = TimeFunction(name='u', grid=grid)
m = Function(name='m', grid=grid)
```

High-level function symbols associated with user data

```
eqn = m * u.dt2 - u.laplace
```

Symbolic equations that expand finite-difference stencils

```
op = Operator(expressions)
op.apply(time=ntime)
```

Automatic code generation and execution from high-level expressions

Symbolic optimization to reduce computation per stencil point

Loop-level optimization for efficient parallel execution

Just-in-time compilation of optimized C code