```
                          ┌─────────┐
                          │  Start  │
                          └─────────┘
                               │
                               ▼
                      ┌─────────────────┐
                      │   Initialize    │
                      └─────────────────┘
                               │
                               ▼
                          ╱─────────╲                              ┌───────┐
                         ╱  running? ╲  ──────── false ──────────▶ │  End  │
                         ╲           ╱                             └───────┘
                          ╲─────────╱
                               │
                             true
                               │
                               ▼
                  ┌──────────────────────────┐
                  │    Calculate Δt           │
                  │ delta = currentTime - lastTime │
                  └──────────────────────────┘
                               │
                               ▼
                  ┌──────────────────┐          • Move entities
                  │   update(Δt)     │          • Check collisions
                  │   Logic only     │          • Update game state
                  │  No rendering!   │          • Frame-independent!
                  └──────────────────┘
                               │
                               ▼
                  ┌──────────────────┐          • Clear screen
                  │     draw()       │          • Draw entities
                  │  Rendering only  │          • Render HUD
                  │    No logic!     │          • Fast & efficient!
                  └──────────────────┘
                               │
                               ▼
                  ┌──────────────────┐
                  │     sync()       │
                  │   Control FPS    │
                  │  Target: 60 FPS  │
                  └──────────────────┘
```

Start → **Initialize** → **running?**

- **running?** — false → **End**
- **running?** — true → **Calculate Δt** (delta = currentTime - lastTime)

update(Δt) — Logic only — No rendering!
- Move entities
- Check collisions
- Update game state
- Frame-independent!

draw() — Rendering only — No logic!
- Clear screen
- Draw entities
- Render HUD
- Fast & efficient!

sync() — Control FPS — Target: 60 FPS

Key Benefits:

Testable (update() without display)
Frame-rate independent (delta time)
Predictable performance (60 FPS)
Clean separation of concerns