# **Lean pre-coding sheet — 89/89**

**Component:** crates/vm\_app/ui/public/map/tiles/world.mbtiles (offline vector-tiles DB; binary)  
 **Version/FormulaID:** VM-ENGINE v0

## **1) Goal & success**

**Goal:** Ship a **local** MBTiles database so MapLibre renders maps entirely **offline** in the desktop app.

**Success:** App renders base map without any HTTP/DNS; tiles/fonts/styles are bundled; reports remain self-contained.

## **2) Scope**

**In:** One binary **MBTiles** file at ui/public/map/tiles/world.mbtiles, consumed by the UI’s MapLibre style. (Asset only; not read by core/pipeline.)

**Out:** Frontier logic or contiguity rules (computed in core/pipeline; map is presentation only).

## **3) Inputs → outputs**

**Inputs:** This MBTiles file; the **style.json** next to it points to local sources.

**Outputs:** None. Visuals only; no effect on Result / RunRecord.

## **4) Entities/Tables (minimal)**

## **5) Variables (only ones used here)**

None.

## **6) Functions (signatures only)**

N/A (static asset).

## **7) Algorithm outline (practical steps)**

Place world.mbtiles at crates/vm\_app/ui/public/map/tiles/. (Path matches the repo skeleton.)

Reference it **locally** from style.json (local sources; no remote glyphs/sprites).

UI loads the style; backend exposes only **local** files; pipeline output (e.g., **FrontierMap**) is overlaid visually—map does not change computation.

## **8) State flow (very short)**

Start app → style loads → tiles read locally → optional overlays styled by **FrontierMap** statuses; **no network** used.

## **9) Determinism & numeric rules**

Purely presentational; cannot alter allocation/gates/labels. Core determinism and rounding rules apply only to computational artifacts.

## **10) Edge cases & failure policy**

Missing MBTiles: map panel hides; reports still render (frontier text/table remain).

Any **remote** URL in style/sources/glyphs/sprite is a config error; replace with packaged files.

Adjacency edge types, if shown, must use the fixed set {land, bridge, water} from the data—styling only.

## **11) Test checklist (must pass)**

Launch app **offline**; base map renders; zero HTTP/DNS calls observed.

Frontier overlay colors/legend match statuses from **FrontierMap** tests; absence of tiles does not change Result/RunRecord.

**All 89/89 sheets completed.**

Sources

##### **You said:**

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###### **ChatGPT said:**

Thought for 30s

Noted.

All 89 lean pre-coding sheets are complete and aligned with Docs 1–7 + Annex A/B. No cross-doc conflicts surfaced in the sheets.

If you want a single consolidated INDEX.md of all sheets (or for me to start generating code stubs), say which you prefer.