# Project Handoff — Car Dealer Prototype

## Snapshot

• Project: car-dealer-prototype (React + Vite SPA)

• Entry: index.html and src/main.jsx -> src/App.jsx

• Dev server: Vite (dev runs used port 5174 in the environment)

• Persistence: localStorage for cash, inventory, listings

## High-level feature list

• Market + Inventory browsing.

• Listing flow: move car from inventory -> listing.

• Buyer wave generation (automatic, scheduled, persisted).

• Negotiation flow wired: "Negotiate" opens negotiation modal with buyer context.

• Listing modal: shows listing details, buyer offers, price edit with 60s cooldown, non-numeric CooldownRing, scrollable buyer list.

• Header: Refresh Market button shares the same CooldownRing.

• Toasts for price updates and sale completion.

• Car generation fixed: damages reduce condition and estimated resale.

## Files changed / created

• src/App.jsx — central state and logic (generateCarInstance, buyer scheduling, cooldowns).

• src/components/Market.jsx — shows damage totals and warnings.

• src/components/ListingModal.jsx — listing UI, buyer list scrollable, price edit + CooldownRing.

• src/components/CooldownRing.jsx — new component for circular cooldown visuals.

• src/styles.css — modal height cap and .buyer-list scroll area.

## Data shapes

• Car: {id, make, model, year, mileage, condition, base, asking, reserve, estimatedResale, damages, status}

• Listing: car fields + {id, listPrice, createdAt, buyers[], waveSchedule[]}

• Buyer: {id, budget, offer, patience, interest}

• Modal: {side: "buy"|"listing"|"sell", subject: <car|listing>, buyer?: <buyer>}

## Buyer wave rules (summary)

• Ratio = listPrice / (estimatedResale || base)

• ratio <= 0.95: attractive -> larger waves (3,2,1)

• ratio <= 1.05: reasonable -> smaller waves

• ratio <= 1.15: slightly high -> minimal waves

• ratio > 1.15: overpriced -> rare waves

• Follow-up waves for hot listings scheduled probabilistically (keeps marketplace lively).

## Cooldowns & UI

• Price update and refresh cooldowns: 60s each.

• Visual-only indication: CooldownRing (circular) shown in header and Listing modal (no numeric countdown).

• now state in App ticks once/second; ring animation smoothed with RAF.

## What was fixed (history)

• Negotiation modal wiring (Listing -> App -> NegotiationModal).

• Vite entry error (added root index.html earlier).

• ReferenceError (car vs subject) resolved by canonicalizing modal.subject.

• Buyer automation: removed manual generator; implemented scheduled waves and persistence.

• Damage/condition mismatch fixed: damages generated before pricing; condition reduced and estimatedResale adjusted.

• Duplicate Refresh button removed; consistent CooldownRing used.

• Modal stretching with many buyers fixed (scrollable buyer list + modal height cap).

## Known quirks & trade-offs

• Follow-up waves are probabilistic. Can be made deterministic if desired.

• Cooldown ring updates every second; RAF used for smoothing.

• Accessibility: CooldownRing has no ARIA descriptor yet.

• No automated tests included yet.

## How to run (PowerShell)

1. cd C:\School\project\car-dealer-prototype

2. npm run dev

Note: Vite may fallback to another port if 5173 is busy (your runs used 5174).

## Recommended next steps

• Add ARIA descriptors for cooldown controls (non-numeric).

• Optionally show a non-numeric next-wave indicator in Listing modal based on listing.waveSchedule.

• Add unit tests for generateCarInstance and schedule functions.

• Tune follow-up-wave aggressiveness or add a per-listing cap.

• Polish ring visuals or add optional ring size variants.

## Quick debugging tips

• Look at listing.waveSchedule for scheduled waves: it contains {id, dueAt, size}.

• Increase buyers quickly for testing by temporarily calling generateBuyerWave(listingId, size) from a dev console (or add a dev-only button).

## Contact / Handoff note

This DOCX handoff was generated from the repository state. If you want alternate formatting (styles, headings bolded, or a printable PDF) I can produce that next.

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