```
// src/demo/App.tsx

import React, { useState } from "react";
import { EncoderDemo } from "./EncoderDemo";
import { DecoderDemo } from "./DecoderDemo";
import { SignalPreview } from "./SignalPreview";
import type { WnspFrame } from "../protocol/frameTypes";
import { encodeTextToFrames } from "../codec/
frameEncoder";

export const App: React.FC = () => {
  const [previewFrames, setPreviewFrames] =
useState<WnspFrame[]>([]);

  const handlePreviewGenerate = () => {
    const frames = encodeTextToFrames("NEXUS OS");
    setPreviewFrames(frames);
  };

  return (
    <div
      style={{
        fontFamily: "system-ui, sans-serif",
        color: "#eee",
        background: "#000",
        minHeight: "100vh",
        padding: "1rem",
      }}
    >
      <h1>MesgNexusOS – WNSP Demo</h1>
```

```
      <p style={{ maxWidth: 600, fontSize: 14, color: "#ccc" }}>
        This demo encodes text into wavelength-based frames (WNSP) and shows a
        simulated flashing signal. It’s a prototype for a wavelength-native
        communication layer that works across devices and for color-blind users.
      </p>

      <div
        style={{
          display: "grid",
          gridTemplateColumns: "minmax(0, 1.5fr) minmax(0, 1fr)",
          gap: "1rem",
          marginTop: "1rem",
        }}
      >
        <div style={{ display: "flex", flexDirection: "column", gap: "1rem" }}>
          <EncoderDemo />
          <DecoderDemo />
        </div>
        <div style={{ display: "flex", flexDirection: "column", gap: "1rem" }}>
          <button
            onClick={handlePreviewGenerate}
            style={{ padding: "0.5rem 1rem", alignSelf: "flex-start" }}
          >
            Generate Preview for "NEXUS OS"
```

```
          </button>
          <SignalPreview frames={previewFrames} />
        </div>
      </div>
    </div>
  );
};
```