

Task: Synced Lyrics Generator Tool (React + Next.js)

Goal

Build a **web-based tool** that allows a user to upload an audio file, enter lyrics, and generate **time-synced lyrics** that can be exported as either a **JSON file** or an **.Irc file**.

The focus is on **simplicity, speed, and usability**.

Tech Stack

- **Framework:** React with Next.js
 - **Frontend only** (no backend required unless strictly necessary)
 - Must run fully in the browser
-

Core Functional Requirements

1. Audio Handling

- User can upload an audio file (e.g. `.mp3, .wav`)
 - Audio player with:
 - Play / Pause
 - Seek bar
 - Current timestamp display (mm:ss.ms)
 - Smooth playback and accurate timestamp tracking
-

2. Lyrics Input

- User can input lyrics in a text area
 - Lyrics should be **line-based** (each line represents one lyric line)
Ability to:
 - Paste full lyrics
 - Edit individual lines
-

3. Syncing / Timestamping

- User can sync lyrics manually while audio is playing
Expected interaction:
 - Select a lyric line
Press a button or keyboard shortcut (e.g. space / enter) to assign the current timestamp
 - Display assigned timestamps next to each lyric line
 - Allow:
 - Editing timestamps manually
 - Re-syncing a line
 - Clearing a timestamp
-

4. Output Formats

The tool must support exporting synced lyrics as:

a) JSON

Example structure:

```
[  
  { "time": 12.45, "text": "First lyric line" },  
  { "time": 18.90, "text": "Second lyric line" }  
]
```

b) .LRC

Example:

```
[00:12.45]First lyric line  
[00:18.90]Second lyric line
```

- User can download the generated file
 - File name should be customizable or auto-generated
-

UI / UX Requirements

- Clean, minimal, and intuitive UI
 - Logical flow:
 - Upload audio
 - Paste lyrics
 - Sync lyrics
 - Export file
 - Responsive layout (desktop-first, mobile usable is a plus)
 - Clear visual indicators for:
 - Active lyric line
 - Synced vs unsynced lines
 - Keyboard shortcuts are a plus
-

Non-Functional Requirements

- No unnecessary complexity
 - Fast and responsive
 - Clear code structure
 - Reusable components
 - Proper state management (React hooks or lightweight state solution)
-

Nice-to-Have (Optional)

- Auto-scroll lyrics during playback
 - Highlight current lyric while audio plays
 - Undo last timestamp
 - Import existing `.lrc` or JSON file for editing
-

Deliverables

- Next.js project (Git repo)
 - Clear instructions to run locally
 - Brief README explaining:
 - How the tool works
 - Any assumptions or limitations
-

Key Criteria

- Ease of use (UI/UX)
- Accuracy of timestamps
- Code clarity and maintainability
- Overall user experience