

Music Maker - Project Report

What was done:

This project is a web-based music creation tool that allows users to build multi-track compositions. The application includes drag-and-drop support for instruments, adjustable BPM and volume controls, track looping, microphone recording, and exporting songs as WAV files. It has a professional, modern design and is optimized for both desktop and mobile devices.

Tools and Technologies:

- HTML5: Semantic structure and Web Audio API
- CSS3: Responsive design and animations
- JavaScript (ES6+): Application logic with async features
- Web Audio API & MediaRecorder API: Audio processing and recording
- No external frameworks or libraries used

Points Requested & Justification (40/40):

- Well-written PDF report: 3/3
- Application is responsive on desktop and mobile: 4/4
- Application works on Firefox, Safari, Edge, and Chrome: 3/3
- Clear directory structure and organization: 2/2
- Feature implementation: 28/28

Includes:

- * Drag & drop instruments
- * Adjustable BPM and per-track volume controls
- * Multi-track support with looping
- * Microphone recording and WAV export
- * Professional UI/UX design and keyboard shortcuts

TOTAL: 40 / 40 points.

User Manual:

1. Open index.html in a modern browser.
2. Click 'Add Track' to create a new track.
3. Drag instruments from the palette onto the track timeline.
4. Click 'Play All' to start playback or 'Stop All' to stop.
5. Adjust BPM using the slider.
6. Record vocals using the 'Record Vocals' button.

7. Download your composition as a WAV file with 'Download Song'.
8. Use keyboard shortcuts for faster editing: Space (Play/Stop), T (Add Track), R (Record), S (Save).

Declaration of AI Usage:

GitHub Copilot was used as a coding assistant for generating boilerplate code, suggesting improvements, and assisting with Web Audio API implementation. The core logic and creative design were developed independently.