

# Kill the Cockroaches! - Game Documentation

**Author:** Romel Ligligon, 3rd Year B, CIT

**Game Overview:** "Kill the Cockroaches!" is a fun and fast-paced browser-based clicker game where players test their reflexes by squashing as many cockroaches as possible before time runs out. With engaging visuals, immersive audio, and increasing difficulty, it's a thrilling challenge for players of all ages. The game is designed to work seamlessly across desktops, tablets, and smartphones.

## Features

- **Addictive Gameplay:** Click to squash cockroaches as they scuttle across the screen.
- **Countdown Timer:** Race against a 100-second clock to maximize your score.
- **Score Tracking:** Each squashed cockroach adds one point to your score.
- **Rising Challenge:** Cockroaches spawn faster every 10 seconds, keeping you on your toes.
- **Audio Immersion:** Enjoy background music and satisfying squish sounds, with a mute/unmute option.
- **Responsive Design:** Play smoothly on any device, from phones to large monitors.
- **Visual Feedback:** A "Speed Increased!" alert pops up when the game gets tougher.
- **Custom Cursor:** Wield a slipper-shaped cursor to enhance the squashing experience.
- **Game Over Screen:** See your final score and replay with a single click.

## File Structure

```
kill-the-cockroaches/  
├── index.html          # Core game structure  
├── style.css           # Styling for visuals and layout  
├── script.js           # Game logic and interactivity  
├── manifest.json       # Progressive Web App configuration  
├── settings.json       # Live Server settings (port 5501)  
├── assets/  
│   ├── bg-music.mp3    # Background music loop  
│   ├── squish.mp3      # Squish sound effect  
│   ├── cockroach.png   # Cockroach sprite  
│   ├── dead-cockroach.png # Dead cockroach sprite  
│   ├── cock-bg.png     # Game area background  
│   └── slipper.png     # Custom cursor
```

## Technologies Used



- **HTML5:** Builds the game's structure and UI.

- **CSS3:** Powers responsive design, animations, and custom styling (e.g., slipper cursor).
- **JavaScript:** Drives game mechanics, event handling, and dynamic updates.
- **Web Audio API:** Manages background music and squish sound effects.
- **Progressive Web App (PWA):** Enables offline play and app-like experience (via `manifest.json`).

## How to Play

1. **Start the Game:** Click "Start Game" on the welcome screen to dive in.
2. **Squash Cockroaches:** Use your mouse to click on cockroaches as they appear.
3. **Rack Up Points:** Each squashed cockroach boosts your score by one.
4. **Beat the Clock:** You have 100 seconds to squash as many as possible.
5. **Watch the Pace:** Every 10 seconds, cockroaches spawn faster, making it harder!
6. **Game Over:** When time's up, your final score appears with an option to play again.

## Controls

- **Mouse Click:** Click cockroaches to squash them.
- **Mute/Unmute Button:** Toggle music and sound effects (  /  ).

## Audio

- **Background Music:** A looping track plays during gameplay, creating an immersive vibe. Mute it if you prefer silence.
- **Squish Sound:** A satisfying sound plays each time you squash a cockroach (muted when audio is off).

## Visuals

- **Cockroach Sprites:** Live cockroaches use `cockroach.png`, switching to `dead-cockroach.png` when squashed.
- **Custom Cursor:** A slipper (`slipper.png`) replaces the default cursor for thematic fun.
- **Game Area:** A textured background (`cock-bg.png`) sets the scene.
- **Popups:** Start and game-over screens use sleek, centered overlays with smooth styling.

## Responsive Design

The game adapts to any screen size, ensuring a consistent experience on mobiles, tablets, and desktops. The cockroach area scales to 80% of the screen width, and popups are centered for visibility.

## Customization

Want to tweak the game? Here's how:

- **Game Duration:** Edit `timeLeft` in `script.js` (default: 100 seconds). For example, set `let timeLeft = 120` for a 2-minute game.
- **Spawn Rate:** Adjust `spawnRate` in `script.js` (default: 1200ms). Lower values (e.g., 800) make cockroaches spawn faster.
- **Assets:** Swap files in the `assets/` folder:
  - Replace `bg-music.mp3` for new background music.
  - Update `squish.mp3` for a different squish sound.
  - Change `cockroach.png`, `dead-cockroach.png`, `cock-bg.png`, or `slipper.png` for new visuals.
- **Difficulty Curve:** Modify the spawn rate reduction in `startGame()` (currently decreases by 200ms every 10 seconds).

## Setup Instructions

1. Clone or download the game files.
2. Ensure all assets are in the `assets/` folder.
3. Open `index.html` in a browser or use a local server (e.g., VS Code Live Server on port 5501).
4. Click "Start Game" and enjoy!

## Notes

- **Offline Detection:** The game alerts you if you're offline on load, ensuring you're aware of connectivity issues.
- **PWA Support:** The `manifest.json` enables installation as a web app, though you may want to add icons for a polished experience.
- **Autoplay:** Some browsers block audio autoplay; the game handles this gracefully with a console log.

Have fun squashing cockroaches! For questions or feedback, reach out to Romel Liglison.