Video Presentation Talk

🎙️ Presenter 1: Rashmika S.J

Duration: ~1.5 minutes

1. **Greeting + Project Info**
   "Hello everyone, we are from Mepco Schlenk Engineering College, Department of CSE. Our project is titled *'Perceptual Hash Techniques for Audio Copyright Protection in Decentralized Systems'*. I'm Rashmika S.J, and my teammate Reshika A.S will be joining me in this presentation. Our guide is Dr. N. Kavitha, Assistant Professor (Sr. G)."

2. **Introduction**
   "Music piracy is the unauthorized copying and distribution of copyrighted music, causing major losses to artists and record labels. Technologies like perceptual hashing and blockchain offer promising solutions. Our system, called **HADES**, uses these technologies to detect altered audio copies and store them securely on decentralized platforms like IPFS, ensuring artist rights are protected."

3. **Objectives**
   "The main goals of our project are:

   - To develop a robust audio detection system using perceptual hashing,
   - And to create a secure, peer-to-peer framework for copyright protection."

4. **System Design & Perceptual Hashing Module**
   "We use a tool called **Panako** for fingerprinting audio, which is robust against pitch, speed, and noise changes. The audio is processed using STFT and MFCC, features are extracted, thresholded into binary form, and hashed for comparison."

🎙️ Presenter 2: Reshika A.S

Duration: ~1.5 minutes

1. **Similarity Check & Blockchain Comparison**
   "Next, we use the **OLAF algorithm** for similarity checks. It compares the perceptual hash of a new audio file with existing ones using Hamming distance. If the similarity exceeds 50%, the file is flagged for copyright infringement. These hashes are checked against a secure blockchain database."

2. **IPFS Storage & Smart Contract**
   "After validation, audio files are uploaded to **IPFS**, and the file's URI

along with its perceptual hash is stored on the Ethereum blockchain through a smart contract. This ensures transparency and tamper-proof copyright records."

3. **Implementation Highlights**
   "We tested the system with various scenarios. It accurately flagged modified files and successfully uploaded legitimate ones. We also observed gas usage and performance."

4. **Social Impact & Conclusion**
   "Our solution protects artist rights, reduces piracy, and fosters a fair environment for creative expression. Thank you for watching our presentation."