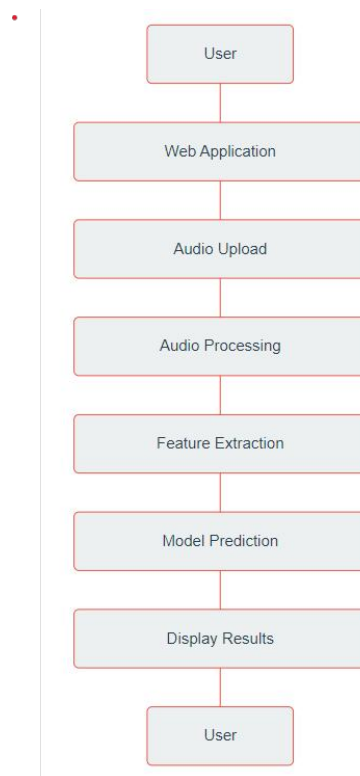


Data Flow Diagrams (DFD)

Level 0 DFD:



Level 1 DFD:

1. Data Acquisition and Preprocessing
 - User: Uploads audio file.
 - Web Application: Receives and stores the audio file.
 - Audio Processing: Converts audio to uniform format, applies noise reduction.
2. Feature Extraction and Model Training
 - Feature Extraction: Extracts MFCCs and other features from audio.
 - Model Training: Splits data, trains model, tunes hyperparameters.
3. Model Evaluation and Deployment
 - Model Evaluation: Evaluates model performance.
 - Prediction API: Serves predictions via web app.
 - Display Results: Shows recognition results to the user.