Project Name: Bharatlaw Text-to-speech task

Introduction:

The project aims to automate the process of summarizing legal texts using natural language processing techniques and then converting the summary into an audio file. This can be particularly useful in scenarios where individuals need to quickly grasp the key points of legal documents or judgments.

Problem Statement:

Develop a proof-of-concept solution to generate concise audio summaries of given documents.

Objectives:

1. Develop a system for automatic text summarization using transformer-based models.

2. Integrate text-to-speech synthesis to convert the generated summary into an audio format.

3. Provide a user-friendly and efficient solution for legal professionals and individuals to quickly understand legal documents.

Resources:

- Python programming language
- Conda environment management
- Transformers library (version 2.8.0)
- Torch library (version 1.4.0)
- gTTS (Google Text-to-Speech) library
- T5 (Text-to-Text Transfer Transformer) model for summarization

Proposed Solution:

1. Set up a virtual environment using `virtualenv` for better dependency management.

2. Install necessary libraries and packages using `pip` and `conda`.

3. Use the T5 transformer model for text summarization.

4. Tokenize the input text and generate a summary using the T5 model.

5. Convert the generated summary into an audio file using gTTS.

6. Save the audio file for further use.

Result:

The project successfully demonstrates the automatic summarization of legal texts and the conversion of the summary into an audio format. Users can input lengthy legal documents, and the system will provide a concise summary in both text and audio forms, improving accessibility and efficiency in understanding legal content.