**EXPERIMENT NO. 10**

**AIM:** Insert data from an audio signal using LSB coding method

**APPARATUS USED:** MATLAB 11

**THEORY:** Data hiding is a method of hiding secret messages into a cover-media such that an unintended observer will not be aware of the existence of the hidden messages. In this experiment, audio signal is selected as the cover media. In the literature, many techniques about data hiding have been proposed. One of the common techniques is based on manipulating the least-significant-bit (LSB) by directly replacing the LSBs of the audio signal with the message bits. LSB methods typically achieve high capacity. The message can be a pseudo random sequence or binary image data or any other bit-stream.

**Encoding:**

1. Read the given audio signal.

2. Convert the audio signal to ‘N’ number of frames

3. Represent each frame, f( i) by ‘k’ number of bits

4. Read a binary bit-stream, b(i)

5. Use ***getbit( )*** to find the LSB of the frame(i)

6. Use ***setbit( )*** to substitute the LSB with binary bit-stream, b(i)

7. Write the up sampled signal.

8. Plot the graph for up sampled signal.

9. Play the audio signal

**RESULT:**

A binary bit-stream has been inserted successfully from an audio signal using LSB method.