**EXPERIMENT NO. 12**

**AIM:** Handling Video files in MATLAB.

a Read an Video file, its sampling rate and bits per sample.

1. Write a Video file, at different sampling rates, at different bits per sample.
2. Play a Video file at different sampling rates.

**APPARATUS USED:** MATLAB 11

**THEORY:** A video is a collection of a large number of images, shown at such a quick speed that our eye perceives them to be continuous. For video processing, we basically consider each frame of the video as an image, and we operate on that image. Then there is a small time interval, which is close to the interval for which each frame is actually shown in the video, before we move on to the next frame. This helps us to accurately access the entire video. Video signal is basically any sequence of time varying images. In a digital video, the picture information is digitized both spatially and temporally and the resultant pixel intensities are quantized.

Common Video Formats

• Digital video frames that are displayed at a prescribed frame rate. For example, frame rate of 30 frames/sec is used in NTSC video.

• The Common Intermediate Format (CIF) has 352 x 288 pixels, and the Quarter CIF (QCIF) format has 176 x 144 pixels.

• Each pixel is represented by three components: the luminance component Y, and the two chrominance components Cb and Cr.

**STEPS FOLLOWED:**

1. Use ***avifile( ), aviread( )*** to read a video file.
2. Use ***frame2im( ), im2frame( )*** and ***addframe( )*** to write to a video file

**RESULT:**  Operations of read, write and play of video files in MATLAB have been implemented.