**ASSIGNMENT 2**

**1. What is an Encoding format? List down encoding formats for various types of data ( Text, Number, Photo, Audio, Video).**

**Ans:** The process of conversion of data from one form to another form is known as Encoding. It is used to transform the data so that data can be supported and used by different systems.

Here's a list of common encoding formats for various data types:

* **Text:**
* ASCII (American Standard Code for Information Interchange): A character encoding standard for electronic communication, representing text in computers.
* UTF-8 (8-bit Unicode Transformation Format): A variable-width character encoding used for electronic communication, capable of encoding all possible characters (code points) in Unicode.
* UTF-16 and UTF-32: Other Unicode encoding formats that use 16 and 32 bits respectively.
* **Numbers:**
* IEEE 754: A standard for floating-point arithmetic used in computers, defining formats for representing floating-point numbers.
* **Photos/Images:**
* JPEG (Joint Photographic Experts Group): A commonly used method of lossy compression for digital images.
* PNG (Portable Network Graphics): A raster-graphics file-format that supports lossless data compression.
* GIF (Graphics Interchange Format): Supports both static and animated images.
* BMP (Bitmap Image File): A raster graphics image file format used to store bitmap digital images.
* **Audio:**
* MP3 (MPEG-1 Audio Layer III): A coding format for digital audio, known for its lossy compression.
* WAV (Waveform Audio File Format): An audio file format standard for storing an audio bitstream on PCs.
* FLAC (Free Lossless Audio Codec): An audio coding format for lossless compression of digital audio.
* AAC (Advanced Audio Coding): A standardized, lossy compression and encoding scheme for digital audio.
* **Video:**
* MP4 (MPEG-4 Part 14): A digital multimedia container format most commonly used to store video and audio.
* AVI (Audio Video Interleave): A multimedia container format introduced by Microsoft.
* MKV (Matroska Video): An open standard, free container format that can hold an unlimited number of video, audio, picture, or subtitle tracks.
* MOV: A multimedia container file format developed by Apple.