**Discuss the distinction between lossy and lossless compression. Give appropriate techniques applied in each**

**Lossy compression** and **Lossless compression** are the categories of data compression methods. The main difference between the two compression techniques is that, The lossy compression technique does not restore the data in its original form, after decompression on the other hand lossless compression restores and rebuilt the data in its original form, after decompression.

Differences :-

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| **Lossy Compression** | **Lossless Compression** |
| Algorithms used in **Lossy** compression are:   * Transform coding, * [Discrete Cosine Transform](https://www.geeksforgeeks.org/discrete-cosine-transform-algorithm-program/), * Discrete Wavelet Transform, * fractal compression etc. | Algorithms used in **Lossless** compression are:   * [Run Length Encoding](https://www.geeksforgeeks.org/run-length-encoding/), * [Lempel-Ziv-Welch](https://www.geeksforgeeks.org/lzw-lempel-ziv-welch-compression-technique/), * [Huffman Coding](https://www.geeksforgeeks.org/huffman-coding-greedy-algo-3/), Arithmetic encoding etc. |
| Lossy compression is the method which eliminate the data which is not noticeable. | While Lossless Compression does not eliminate the data which is not noticeable. |
| In Lossy compression, A file is not restored or rebuilt in its original form. | While in Lossless Compression, A file can be restored in its original form. |
| Lossy compression has more data-holding capacity. | Lossless Compression has less data-holding capacity than Lossy compression technique. |
| Lossy compression is used in Images, audio, video. | Lossless Compression is used in Text, images, sound. |