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**"A ROBUST IMAGE WATERMARKING USING TWO LEVEL
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A ROBUST IMAGE WATERMARKING USING TWOLEVEL DCT AND WAVELET PACKETS DENOISING

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Abstract:

End users can now readily tamper with original digital photographs thanks to the employment of several types of software for high-level image manipulation. As a result, it is impossible to tell if the current digital image is genuine or fake. The manipulators use a variety of post-processing processes to thwart counterfeit detection systems. , which is based on DCT transform and spread spectrum communications technique. We compute the DCT of non overlapping 8x8 blocks of the host image, then using the DC coefficients of each block we construct a low-resolution approximation image. Changing the contrast of the entire image or copying moving sections is one such operation that many existing approaches fail to manage. We want to implement the detection of copy move fraud in the presence of contrast changes in this project. We'll utilise Discrete Cosine Transforms for this (DCT).

KEYWORDS: Copy Move Forgery, DCT, Contrast Invariant

Introduction:

Digital forensics is a discipline of computer science that investigates, verifies, and recovers digital data and evidence from digital devices such as computers, digital cameras, and video recorders. In the legal business, as well as the media and broadcast industries, digital photographs and videos serve as key sources of evidence for any incident or crime. The key application domains of digital image forensics are these sectors. The widespread availability of a huge number of low-cost multimedia file processing tools, techniques, and software, many of which have various advanced capabilities, has made multimedia data editing and manipulation exceedingly simple. The integrity of digital multimedia data is jeopardised by any sort of unlawful modification or tampering. With today's widespread availability of digital image processing tools and techniques, as well as the staggering number of digital images used in televisions, newspapers, posters, magazines, and websites, the integrity of legal evidence used in courts of law, as well as the media and broadcast industries, is in jeopardy.

With high rise in cyber-crime rate in the present day, protecting the integrity and authenticity of digital multimedia data is extremely crucial. Security and protection of digital multimedia data require digital devices to be equipped with special software and hardware facilities. Special software modules or hardware chips, for example, can be used to insert watermarks. However, such procedures significantly raise the cost of the gadgets, restricting their use.

Watermarking is classified based on the types of watermarks that are used. A visual logo or random numbers can be used as a watermark in most cases. Data should be hidden in one of two ways: spatial domain method or transform space strategy. In the spatial domain method, pixel values are altered