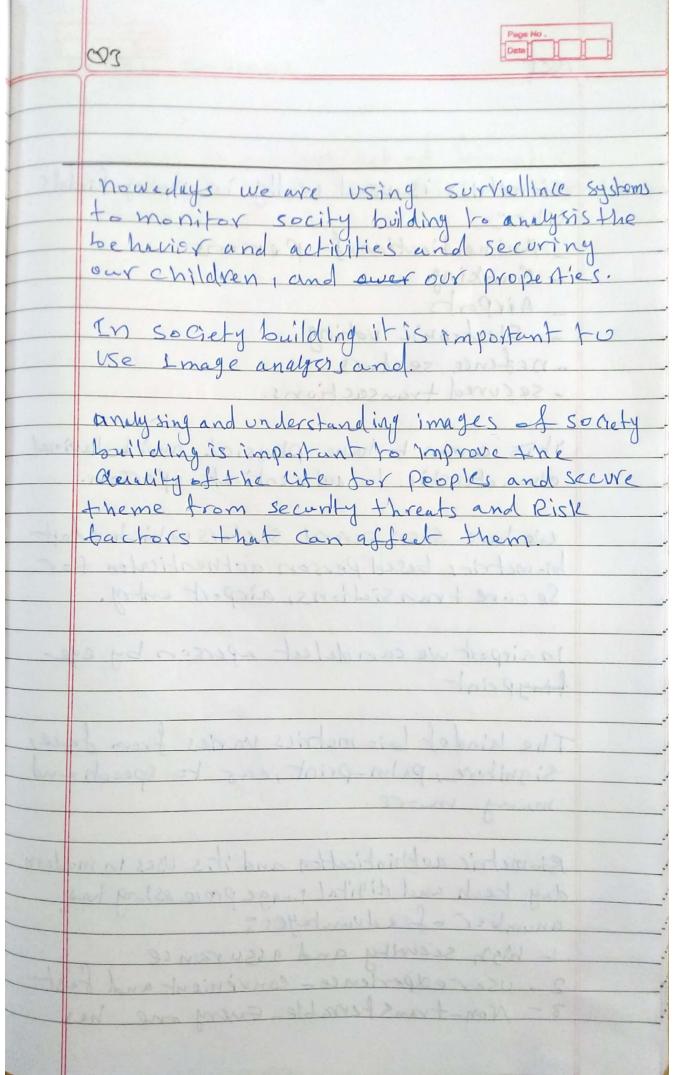
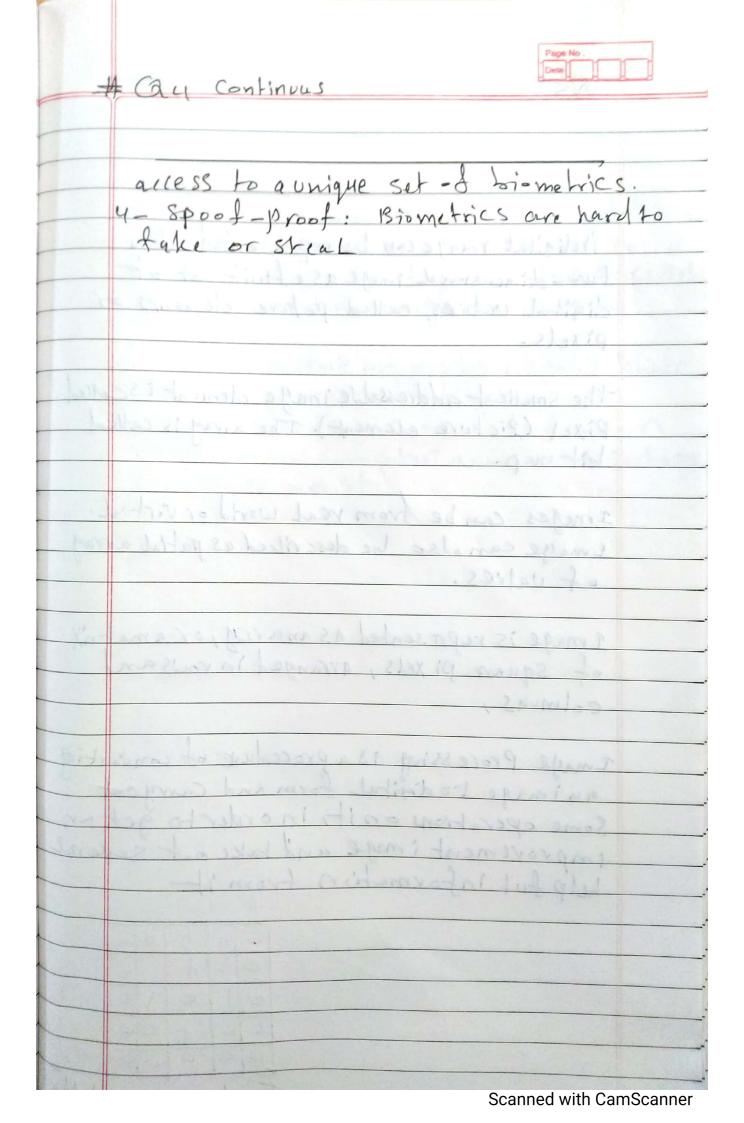
an image traction(x,y) must be digitized both spatially and in amplitude. Typically, a trame grabber or digitizet is used to Sample and quantize the analogue video signal Hence, in order to create an image which is digital , we need to convert continous data into digital form. There are tow Stepsin which it is done: Sampling Quantization the sampling rate determines the spacial resdwhom of the digitized maye, while Quantization level determines the number of gray levels In the digitized image, Amagnitude of the sampled image is expressed as adigital Value in image processing. The transition between continous values of the image Junction and its digital equivalentis Called quantization. The number of quantization levels should be high enough for human perception of line shading details in the image. The occurance of false Contours is the main problem in image which hes been quantized with insufficient bright ness levels

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Page No. - Q2 Pre-processing involves operations on imager at the lowest level of abstraction where both input/output images are intensity images The aim of pre-processing Is an Improvement of the image data that eliminates distoration or enhances some image features Suitable for further processing I mayo enhancement is the most appealing Pre- processing technique, The idea behined enhancement techniques is to bring out detail that is obscured, or simply to highlight certain features of interest man image such us, changing losignthess and contrast of an Inagl. The aim of pro-processing is an improvment of the image data that suppresses unwilling important for further Processing, although geometrics transformations of image like volation, scaling, translation) home since Similar techniques are sul



	Page No .  Date
	Q4
100000	Biometrics is used widly in many fields
	_ Authentication of persons
	- Banking
	- Airports
_	- Electronic voting - nefence sectors
	- secured transactions.
1 600	11-15 comon to have physical and be havioral
7 5700	characterstic to authenticate aperson.
_	1219 has thought political most small pind
	biometrics based person authentication for
	Se cure transictions, airport entry.
	inairport we can detect aperson by eye- tingprint
	The kind of lais metrics varies from fall, signiture, palm-print, ear to speech and many more.
-	Biometric authintication and it, s uses in modern day tech and digital inage processing has
~	anumber of advantages?
_	2- user experience - convenient and fast
	3- Non-transferrable- Every one has
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Adigital image can be represented of a  Adigital image as a finit set of the dimensional image as a finit set of dispital valves, called pature elements or cliental valves, called pature element is called pixels.  The smallest addressable image element is called pixel (Picture element). The array is called bit map.  Images can be from real world or virtual.  Image can also be described as pattal array of valves.  Image is represented as anarray, or amatrix of square pixels, arranged in rows and colmans,  Though Processing is a procedure of convertify an image to digital form and carry out some operations on it in order to get in provenent image and take out several help ful information from it		Page No .
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Q5/ Continue:
The represiblation of M Using array data structure, we can have the reason to perform sampling and quartization processes on a given analoge image Computer.
memory is required to store it, we convert that signal format and then store it in computer and then perform aperations on it