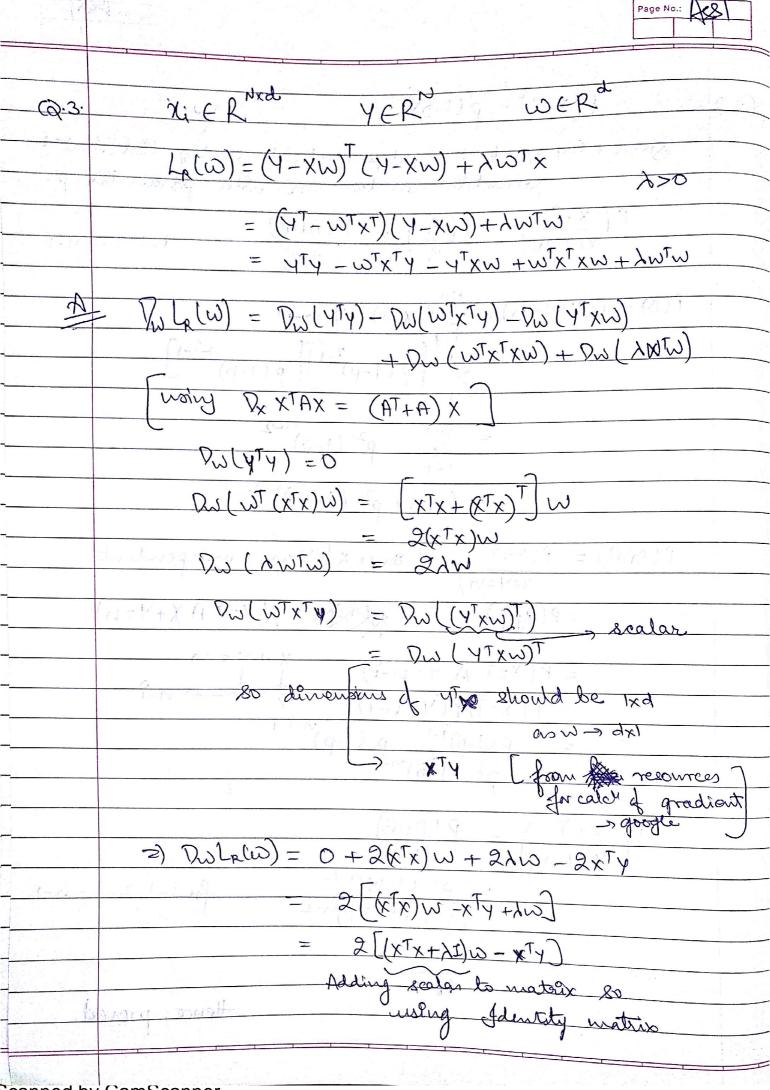
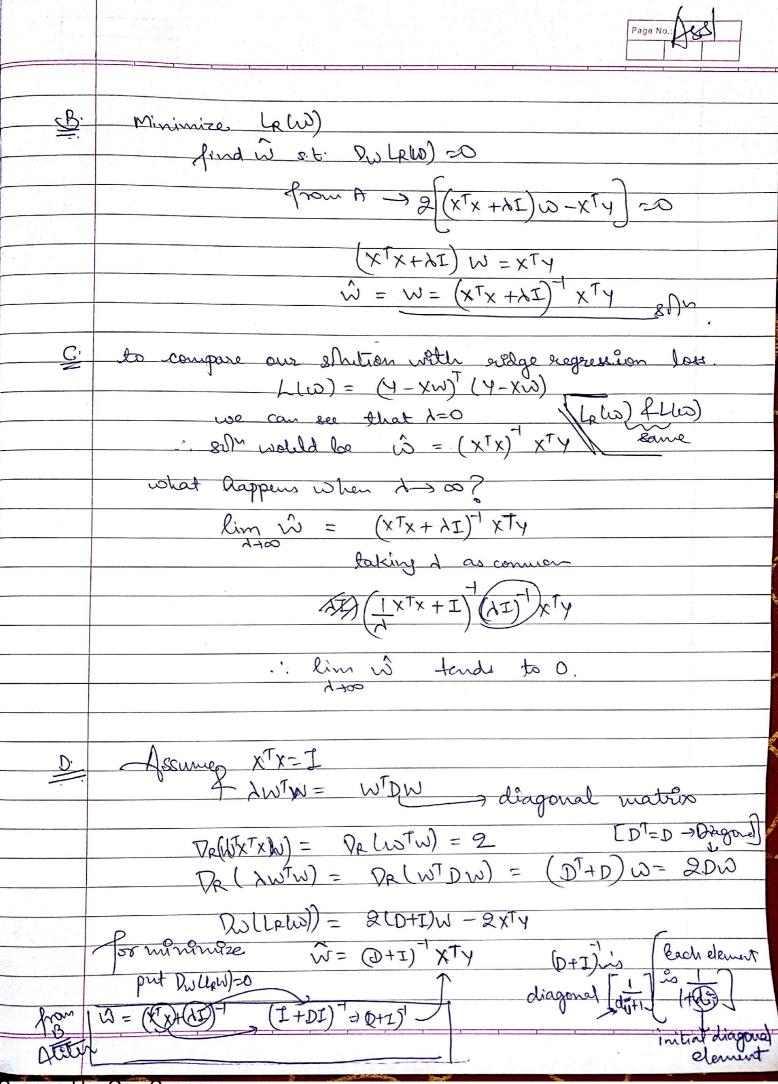
125	CS419 Assignment 1 Kunal Agarwal [ 15011005]
- Q.1·	perobability to rain ->
<u>,                                      </u>	probability for student to come given vaining -> g
· · · · · · · · · · · · · · · · · · ·	jobudents - SNCO (1-91)
	part of having exam
· .	probability for students to come given raining > 9  (-a)  prob of having exam  2 prob of i students showing up.  two are taking ?=;
(F 2)	twe are taking 92j
	Prub of having exam > 7 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	got of the wife approach has in the
	probability it its not rounny >1-1
	prob. for student to come to school $\rightarrow 9/2$ .  (given NOT raining)  (given NOT raining)
1 1 1 1	(giren NOT raining)
	1200 Jours 10 cone -> 12, 6 (1-6)
·	prof of having exam  (at least j students showing) (1-2) & NGP (1-P)
·	(at least i students showing) (1-10) < (i) (1-p)
	4
	- Probability of having exam (professor conducting exam)
	N W N N N N N N N N N N N N N N N N N N
	>> 2 & \$ 1-9 (1-9) + (1-2) & C° p (1-p) -1
	\bullet \bulle

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0.2	$P(x=9) = P(1-p)^{9-1}$
	Given X f V are both independent, identically distributed, Scowetic random var. with parameter p.
	$\frac{P(X=1)}{X+Y=n} = \frac{P(A)}{B} = \frac{P(A\cap B)}{P(B)}$ $i=1n-1$
	$P(B) = P(X+Y=h) = \begin{cases} 2 & P(X=1) & P(Y=h-1) \\ 2 & P(X+Y=h) \end{cases}$
	$ \begin{array}{c c} P = I \\ P = I \\ P = I \end{array} $ $ \begin{array}{c c} P = I \\ P = I \end{array} $ $ \begin{array}{c c} P = I \\ P = I \end{array} $
	$= \sum_{i=1}^{n-1} p^{2} (1-p)^{n-2}$
	$= (N-1) p^2 (1-p)^{N-2}$
	PLANCS) = P(X=1) Since $X PY$ are independent $X+Y=N$
	= PLAAB) = PLX=9 NX+Y=N)
	= P(X=1) P(Y=N-1)
	$= p(1p)^{1-1} p(1-p)^{N-2-1}$ $= p^{2} (1-p)^{N-2}$
to	P/ X=1 / - PLANB)
	(X+Y=N) = $P(B)$ = $P(B)$ = $P(B)$ $P(B)$ $P(B)$
	$(N-1)p^{2}(1-p)N-2$
	thence, proved.

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